THE LIBRARY

The Ontario Institute
for Studies in Education

Toronto, Canada

LIBRARY
AUG 7 1973
THE ONTARIO INSTITUTE
FOR STUDIES IN EDUCATION

Digitized by the Internet Archive
in 2008 with funding from
Microsoft Corporation

http://www.archive.org/details/pedagogicalsemin18provuoft

THE
PEDAGOGICAL
SEMINARY

A QUARTERLY

INTERNATIONAL RECORD OF EDUCATIONAL LITERATURE
INSTITUTIONS AND PROGRESS

LIBRARY
DEC 1972
THE ONTARIO INSTITUTE
FOR STUDIES IN EDUCATION

EDITED BY

G. STANLEY HALL
President of Clark University and Professor of Psychology and Education

---

VOL. XVIII
1911

WORCESTER, MASS.
FLORENCE CHANDLER, PUBLISHER

23018

COPYRIGHT, 1911, BY G. STANLEY HALL

THE BRANDOW PRINTING COMPANY
ALBANY, N. Y.

TABLE OF CONTENTS

William H. Burnham
Arithmetic and School Hygiene 54-73
Ellen Clune Buttenwieser
The Obstinate Child 315-328
Samuel P. Capen
The Supervision of College Teaching 543-550
Thomas Charles Carrigan
The Law and the American Child 121-183
Edmund S. Conklin
The Pedagogy of College Ethics 421-474
John Cotton Dana
The Study of a City in the Schools of that City . . 329-335
Pierce J. Fleming
Moving Pictures as a Factor in Education 336-352
Henry Herbert Goddard
Two Thousand Normal Children Measured by the Binet Measuring Scale of Intelligence 232-259
John A. Hancock
The Place of Reasoning in Teaching 184-196
Louis D. Hartson
A Study of Voluntary Associations, Educational and Social, in Europe during the Period from 1100-1700 . 10-30
The Psychology of the Club; a Study in Social Psychology 353-414
David Spence Hill
Comparative Study of Children's Ideals 219-231
W H. Holmes
Plans of Classification in the Public Schools . . . 475-522
Harry Lyman Koopman
A Basic Educational Delusion 44-46
Richard C. Maclaurin
The Outlook for Research 1-9
W. A. Matheny
The Common Drinking Cup 205-213
A. Millner
The Problem of Jewish Education 214-218
Leonard Blaine Nice
The Disinfection of Books 197-204
R. M. Ogden
Knowing and Expressing 47-53
Paul R. Radosavljevich
What is Education 31-43
Pedagogy as a Science 551-558
George H. Shafer
Health Inspection of Schools in the United States . 273-314

Theodate L. Smith
Dr. Maria Montessori and Her Houses of Childhood . 533-542
A. G. Steele
Training Teachers to Grade 523-532
J. E. Wallace Wallin
Human Efficiency 74-84
Tom A. Williams
Intellectual Precocity. Comparison between John Stuart Mill and the Son of Dr. Boris Sidis 85-103
Literature and Book Notes . . 104-118, 260-272, 415-420, 559-565
Notes 118-120, 566-568

THE
PEDAGOGICAL SEMINARY
Founded and Edited by G. STANLEY HALL

VOL. XVIII   MARCH, 1911   No. 1

THE OUTLOOK FOR RESEARCH[1]

By RICHARD C. MACLAURIN, Sc. D., LL. D.
President of the Massachusetts Institute of Technology

Suppose that you were asked to characterize the American people by means of a few broad generalizations. What would you say? It would depend upon your age and experience. If you were young and quick witted a few brilliant dashes of color would suffice to complete the picture; if older and more wary you would hesitate to take the brush in hand at all. You would perhaps recall the confession of our best informed critic, Mr. Bryce: "When I first visited America, in 1870, I brought home a swarm of bold generalizations. Half of them were thrown overboard after a second visit, in 1881. Of the half that remained, some were dropped into the Atlantic when I returned across it after a third visit in 1883; and although the two later journeys gave birth to some new views, these views were fewer and more discretely cautious than their departed sisters of 1870." If, however, without committing yourself to any opinion you merely attempted to recall what others had most frequently said on such occasions, "The Land of Dollars" or some such phrase could scarcely fail to present itself immediately. In spite of this you should not be too ready to plead guilty to the charge of unusual devotion to material interests. It is true, of course, here as elsewhere, that the world is too much with us and that we exhaust our energy unduly with mere getting and spending. But it is not enough to note the eagerness with which a man acquires his wealth, you must observe the way in which he spends it for an indication of the spirit that really moves him. Now if you do this with America you will see that its moving spirit is not to be spoken of disrespectfully in comparison with that of other countries. Here, as elsewhere, wealth is put to base uses, but it is also put to many that are noble and perhaps there is no more striking evidence of this than in the splendid endowment for education and research that marks off this country from all others in the world. The case of Jonas Clark is only one of many who have striven hard to give others advantages that were denied to them. His foundation of this great University has certainly added lustre to this city and carried the name and fame of Worcester far into regions of the world where otherwise it might never have been heard of. It is well for all of us to do honor to such a man, although on you rests a peculiar obligation to remember him and to show by the earnestness of your pursuit of learning how sincerely you appreciate his splendid provision for advanced study and research. Colleges and universities for the acquisition of knowledge had existed in this country for generations and, at least in some of them, much had been done by scholarly men for the advancement of learning. It remained for Clark to follow in the footsteps of its spiritual parent, Johns Hopkins, and devote itself exclusively to postgraduate work. Conditions have somewhat changed in both these universities, but I hope that the spirit of research will always remain a prominent feature of them both. The world needs a manifestation of this spirit to-day, and America certainly not less than other parts.

---

[1] Address at Clark University on Founder's Day, Feb. 1, 1911.

It is on the outlook for research in this country that I wish to direct your attention. You must know that in spite of the splendid provision for research that is so marked a feature of this country, there is much misgiving as to the future. Indeed no one can fail to be impressed with the striking contrast that is presented between the prevailing pessimism with regard to culture and the prevailing optimism with regard to material advancement. If we put aside the jibes of those who speak as if success in anything obtained by honorable means could be a proper subject for a sneer, we find little serious criticism of our business methods (apart from the moral issues that they raise). When our visitors have gotten over their first surprise at the height of our buildings and the size of the headlines in our newspapers, then, if the music of praise be in them at all they point to our wonderful material successes and sing pæans over our time-saving devices and other evidences of our skill in "practical" affairs. Soon, however, they begin to shake their heads (and too often we shake ours in stupid unison) over the outlook on the side of culture. They say that we cannot create literature, or advance science, or paint pictures.

My own view is that all this is nonsense. I agree neither with the pessimists nor with the optimists. Not with the optimists, for it is not merely with admiration that I am moved when I examine our methods of business. It is true that we have had exceptional success, but that is largely because our opportunities have been exceptional. What we do we do on a great scale, but we often do it very badly and with little regard for real efficiency. Many of our industrial operations are conducted wastefully and in ignorance of the real facts. There is room for vast improvement in almost every branch of our industry by the adoption of more scientific methods. Nor am I on the side of the pessimists. I do not merely *think* that we can produce first rate men of science, I *know* that we do produce them. The deplorable fact is that as a rule we have not the grace to recognize them. Let me cite a few examples, out of many that might be adduced, from the field of my own special interests. Take first the case of J. Willard Gibbs, of Yale. Of him Sir Joseph Larmor addressing the Royal Society of London, and doubtless weighing his words before such an audience, said: "The nineteenth century will be remembered as much for the establishment of the dynamical theory of heat at the very foundation of general physics, as for the unravelment of the nature of radiation and of electricity, or the advance of molecular science. In the first of these subjects the name of Carnot has a place by itself; in the completion of its earlier physical stage the names of Joule and Clausius and Kelvin stand out by common consent; it is not too much to say that, by the final adaptation of its ideas to all reversible natural operations, the name of Gibbs takes a place alongside theirs." Gibbs's chief achievement was the development of the fundamental principles that regulate the trend of transformation in chemical and physical processes. In science to know is to predict, and when you can predict changes in physical state you must be near the root of the matter. And so all competent authorities recognize that Gibbs rendered the greatest service to chemistry by definitely marking out the channels within which a scheme of reactions can proceed. In spite of this he was hardly known in this country at the time when he was making these great advances. He was discovered by a foreigner, Maxwell, who in 1876 contributed an enthusiastic exposition of Gibbs's work to the Cambridge Philosophical Society in England. This introduced Gibbs to Europe and particularly to the great physical chemists of the Dutch school who quickly recognized the importance of Gibbs's work and developed it experimentally. After this, of course, Gibbs was honored by scientific societies at home as well as abroad, but even now few outside a very limited scientific circle have ever even heard of him.

Think next of G. W. Hill, a graduate of Rutgers College, one of the most original characters in the history of American science. He is happily still with us, living apart from the rushing tide that surges in the neighborhood of New York, on his peaceful farm in the valley of the Hudson. What proportion of the graduates of American colleges know anything of Hill, although the most famous of French mathematical physicists, Poincaré, says: "His theory of the moon will make his name immortal. In that work he proves himself not only a skilled artist and persistent investigator, but a profound and original inventor."

These two men belonged to an earlier generation and you may think that things have changed of late. Let me take, then, a thoroughly modern instance — a man too young to be classed with Gibbs and Hill, but one who has given promise that he may yet attain that honor. George E. Hale graduated from the M. I. T. in 1890. The thesis for his degree was entitled "Photography of the Solar Prominences," and in his hands it quickly led to developments which in the opinion of the highest authorities abroad mark the beginning of a new era in astronomy. He has taught us a selective method of photography by means of which we can obtain a picture of the clouds of hydrogen in the sun, another of the clouds of calcium vapor, and so of other elements. From this he has gone on from strength to strength and since the resources of the Mt. Wilson observatory, supported by the Carnegie Institution, have been at his disposal, he has unravelled many of the mysteries of the sun spots, and enabled us not only to detect but to measure the magnetic forces that play around the sun. For such work he has been crowned with honor abroad and warmly acclaimed by a small band of scientists at home. Outside this band, however, his name is scarcely known, even where one might expect otherwise. A few days ago Mr. Carnegie announced that he had added ten million dollars to his endowment of research. In making this gift Mr. Carnegie remarked that all that he had done for the encouragement of research had been fully justified by the work of one genius—Professor Hale, the director of the Mt. Wilson Observatory, and added "All the world will listen to the wizard on the top of Mt. Wilson." Such praise coming from such a source naturally attracted attention. All the newspapers had much to say of Mr. Carnegie and some of them referred to Mr. Hale. The latter's name, however, was evidently new to most of them and in Boston itself I saw no immediate recognition of the fact that this "wizard" was trained at one of the great educational institutions of that city and did epoch making work there twenty years ago. Had he been an equally distinguished foreigner the very details of his domestic life would have been displayed for our edification.

Why this comparative neglect of our fellows? It is certainly not due to any lack of generosity or any unwillingness to recognize genius in our midst. Mr Bryce says that we have "enthusiasm for anything that can be called genius, and an over readiness to discover it." And yet, as I have indicated, we often fail to make the discovery. It seems as if we lacked the sense of value, and, with the best intentions in the world, too often heaped honors on the wrong man. It would be interesting to follow this matter up and discuss its causes. That, however, would lead me astray, for the main purpose of the citations that I have given you has been to prove that as a matter of fact we do produce front-rank men of science. Whether, having regard to the general level of intelligence and to the special educational opportunities that are presented, we produce as many great names as should be expected is another question. It is, however, idle to discuss it; for the only practical question is—can anything be done to improve our condition, whether it be good or bad? Are there any special forces at work making against really first-rate work, and if so, can these forces be counteracted? Could Darwin have been produced in an American University to-day? is a question that has led to an interesting discussion recently. Put in this form the question is easily answered. Such men are not *produced* in any University. They are God's favorite children; and of the education of His favorites He is in no wise particular. Like the poets, they are born not made, or as Osborn puts it, "The first secret of greatness is to be born great"—unfortunately a difficult task. No one, as far as I know, even professes to be so much in the secrets of Providence, or to have penetrated so far into the mysteries of heredity, as to suggest that there is smaller chance of being born great in America than elsewhere. Yet one may be born for great things and fail to perform them through adverse circumstances. Could Darwin have done his work at an American University? Osborn seems to doubt it, and there can be little question that there are many forces at work here that are adverse to the scholarly life.

The influence in this direction that is must commonly discussed is our devotion to material success. Men are probably just as keen to grow rich in other lands, but their chances of success are smaller. Here almost every man of brains is made to feel that there is nothing but self that can permanently exclude him from the circle of the rich. The bait is placed before so many that it is not surprising that many swallow it. It is a bait, too, that attracts men of large vision, for the scale of business is unusually great and many of its larger problems are of a character to appeal to the imaginative mind. And so it comes about quite naturally that an unusually large percentage of the best brains go into the business of America. Then it must be admitted that the rewards of the scholar are smaller here than in older lands. This may not be true of the scholar who becomes famous, but it is true of the larger body that are never heard of. There is not the same respect here as elsewhere for the scholar as such, whether he be successful or not. After all, fame is the last infirmity of noble minds and it does not help a man very much in his dark days to know that he will be appreciated *if* he become famous. He is not made to feel that he is on the right track whether he win sucess or not and that his mere efforts to succeed in the scholarly calling will win him respect. And so he often loses heart before success crowns his labors.

A strong force making against first-rate work is the lack of repose that characterizes our people. If we are not always in a hurry we are nearly always restless. This restlessness shows itself clearly in the field of science. Our young men do not stick long enough to a special line of research, but are too ready to plunge into new fields, into any region indeed that happens to be prominent at the moment. Perhaps it is true that too many of our universities are in, or near, great cities, which present too many distractions—social and political. Of course great work has been done in London, Paris, and Berlin, but almost invariably by men strong enough to keep out of the rush. Even apart from the throbbing life of a great city, there are usually more than enough distractions within a modern university itself. We hear complaints on all hands in this country of the multiplication of machinery, the endless reports that are called for, the crushing load of committee meetings that must be borne. Perhaps our scholars to-day are too ready to assume such burdens, or devote themselves with needless seriousness to such interests. Here and elsewhere men have done great things while burdened with the routine duties of administrative office. Adams, who discovered Neptune, was the bursar of a Cambridge College, and many similar examples might be cited from the leading men of to-day. The strong and determined override all obstacles.

A serious source of danger in this country lurks in an otherwise excellent thing, our peculiar devotion to *institutions*. Practically in all cases the institution overshadows the man. That this should be the case with the mass of students is not at all surprising; but it is surprising with the few who make it their life-work to master a certain subject. It is almost incredible that these should fail at any time to recognize the importance of coming in close personal contact with the master in their chosen field. In the realm of physics an Englishman who has selected his life work does not go to Cambridge, but to J. J. Thomson or to Larmor, just as a Scotsman did not go to Glasgow but to Kelvin, nor a German to Berlin but to Helmholtz. Our men are learning this lesson slowly, but they still go far too much to Harvard or to Yale or to Columbia.

I fear that we must admit that the character of our teaching is one of the forces making for the triumph of mediocrity. The fact is that we teach too much, that we spoon-feed our students and do not throw the better ones nearly enough upon their own resources. A peculiar merit of the Oxford and Cambridge system is the badness of the teaching. The students are brought face to face with really eminent men; these guide them more or less haphazardly into the mine and let them learn as best they may to recognize real gold when they see it. The system, or lack of system, may be hard on the average student but it has its merits for the bright ones. Here, unfortunately, we run some danger of sacrificing everything to the average.

It is sometimes said that we have too many facilities for research. "Every usable drug," says Jordan, "and every usable instrument is on tap. A button brings the investigator all the books of all the ages, all the records of past experience, carrying knowledge far ahead of his present requirements." Of course this is not meant to be taken literally, such facilities being all for good in the saving of valuable time. The danger lies in attaching undue importance to the mere equipment for research, and in paying more attention to the machinery than to the man that makes use of it. Some say that we encourage research too much, and stimulate it artificially. Talk of this kind is, for the most part, nonsense. There is certainly much that goes by the name of research that might well be dispensed with. The Atlantic Monthly has satirized researches to discover "the prefixes in P to be found in Plautus, the terminations in T of Terence and so forth." Such work ought never to be dignified by the name of research, its only use being to keep men out of mischief. Some, who have more serious efforts in mind, complain that much of our research is mediocre in quality and that from the tons of theses that our young graduates produce nothing of any real value ever comes. This is doubtless an exaggeration, but we miss the whole point of all "research" of this class if we fail to see that the effort to be productive is an all important part of real education. As Osborn has recently reminded us, "One cannot too often quote the rugged insistence of Carlyle: 'Produce! Produce! Were it but the pitifullest infinitesimal fraction of a product, produce it in God's name.' 'T is the utmost thou hast in thee; out with it, then!" In this field it is certainly "better to have loved and lost, than never to have loved at all." You may easily get a better grasp of what learning really means, you may get far more insight into real culture, if you honestly try to advance the bounds of knowledge and fail, than if you spend your days in reading of the efforts of those who have been conspicuously successful as pioneers of learning. It is the failure to recognize that it is the giving out rather than the taking in that more than all else makes an educated man or woman that lies at the base of most that is really disquieting in the popular criticisms of education.

After all, however, most of these drawbacks that have been mentioned—materialism, lack of repose, bad teaching and the like—are external and can be overcome. If we fail the fault is not in our stars but in ourselves. Too often, while professing to be scholars, we do not take the scholarly calling with sufficient zeal. A religious friend to whom I had commended the life of Wesley for its literary merits, remarked after reading the book "The religious men of to-day are not like Wesley and *they do not want to be like him*." If we are not like the great scholars of other lands and other days, do we really want to be like them? Is scholarship with us a consuming passion, and does all else seem comparatively trifling? I often doubt it. Last year I met in Europe a group of young physicists. They talked of little else than recent theories of the ether and recent speculations as to the nature of electricity and of matter. Everything else seemed to them trivial. Returning to this country, I met a similar group, or rather a group professing similar interests. They too were ready to discuss such matters *if they were encouraged to do so;* but other thoughts were evidently more in their minds. They had a dozen interests quite as strong as that in physics. Science must be pursued with the same devotion as must art—fundamentally the spirit of both is the same. The scientist like the artist must be ready to do anything and to go anywhere to get in touch with masters in his chosen field. He must deem no sacrifice of time or energy too great to secure a real mastery of the *technique* of his profession. In the field of physics, for example, he may have to spend years in preliminary training over mathematics—as did Maxwell, Stokes, Kelvin, Rayleigh, J. J. Thomson and the like. And if he does this at all, he must do it thoroughly so that he may use his mathematics with ease and grace and not in the blundering cumbrous fashion of the amateur.

Well, we must recognize our shortcomings, but after all the outlook for research is distinctly encouraging. Of the older men it would be an impertinence to say anything, save to remind you that the conquests they have already achieved have won them honor throughout the world. There is much, too, that is promising amongst the young men—they are keen, energetic and full of hope. And they have ground for hopefulness, for they live in stirring times. "The new discoveries," said J. J. Thomson recently, "made in physics during the last few years, and the ideas and potentialities suggested by them, have had an effect upon workers in that field akin to that produced by the Renaissance. Enthusiasm has been quickened, and there is a hopeful, youthful, perhaps exuberant, spirit abroad which leads men to make with confidence experiments that would have been thought fantastic twenty years ago. It has quite dispelled the pessimistic feeling not uncommon at that time, that all the interesting things had been discovered, and all that was left was to alter a decimal or two in some physical constant. There never was any justification for this feeling, there never were any signs of an approach to finality in science. As we conquer peak after peak, we see regions in front of us full of interest and beauty, but we do not see our goal, we do not see the horizon, in the distance tower still higher peaks, which will yield to those who ascend them still wider prospects." I have spoken mainly of physics, because it is there that my special interests lie, but I do not mean to suggest for a moment that that region has a monopoly of the alluring peaks of human knowledge. There are doubtless equally fascinating ranges for exploration in other lands where the spirit of hope is also abroad. Most heartily are our young explorers to be congratulated at the prospects that lie before them. May they brace themselves for the task with the determination and hopefulness that characterize their country and may not a few experience the thrill of scaling peaks that no man in all the ages has yet conquered.

A STUDY OF VOLUNTARY ASSOCIATIONS, EDUCATIONAL AND SOCIAL, IN EUROPE DURING THE PERIOD FROM 1100-1700

By Louis D. Hartson, Fellow in Psychology, Clark University

Charles H. Cooley says that it is in the primary groups' those of the family and neighborhood, that human nature is born and developed, meaning by human nature particularly sympathy and the innumerable sentiments into which sympathy enters, such as love, resentment, ambition, vanity hero-worship, and the feeling of social right and wrong (10, p. 29). Kerschensteiner considers it the function of the school to develop sympathy and the social sentiments and is using as his tool the *Arbeitsgemeinschaft*. Scott and Dewey represent the field of social education in American schools. Jane Addams and Charles Sprague Smith have developed a very important work in education among the less favored social classes. The Boy Scouts are attempting to develop these social sentiments in the workshop of the out-of-doors. All these present day movements, therefore, suggest the value of a study of the voluntary associations of Europe, to determine what the actual record has been, what they have contributed to social education. This paper aims to present the most important manifestations of the spirit of free association and voluntary organization in the life of Europe, during the period from the decline of feudalism to the triumph of the Reformation, as observed in its social and educational aspects.

Picture European society when feudalism was at its height. History was made by the nobles; they were Church and State. All the rest of the people were freemen or serfs, of little influence in public affairs. The course of history since that time has marked the rise, first of the freemen and then of the serfs, to a place of equal importance in State, Church, and Society. This remarkable transformation has been largely due to the organization of the lower classes into societies for the mutual protection of their welfare in education, religion and politics.

THE GILDS

Our study begins with the voluntary organizations formed by the freemen or middle class, the first manifestation of which, outside the family, was the gild. It is known in history by various names because its early manifestations were as broad as society. For a correct understanding of its significance we must dissociate the name gild from any particular connotation, such as an organization of merchants, or a labor-union. The word gild is really as broad as the word society, used in its narrower sense, and its specific character may have been religious, scientific, social, or of a business nature. Frequently gilds served several of these ends.

In a primitive form gilds existed in the eighth century. They arose to supply wants which the family organization could not supply. Brentano (4), Hartwig (15), and Wilda (36) hold variously differing theories as to their original character, according as they see their archetype in the heathen sacrificial assemblies of the north, the Roman burial societies, or the early Christian societies which attempted to apply the principle of loving one's neighbor. The common element, however, which was perhaps the strongest motive power, was the love of sociability. J. Toulmin Smith says that the early English gild was an institution of local self-help, which, before poor-laws were invented, took the place of the modern friendly or benefit society, but with a higher aim; while it joined all classes together in a care of the needy and for objects of common welfare, it did not neglect the forms and the practice of religion, justice, and morality (32, p. xiv). The first three English gilds of which we have reliable and detailed records are those of Abbotsbury, founded and richly endowed by Orcy, a friend of Canute the Great (eleventh century), that at Exeter, and the gild at Cambridge. The capitularies of the Archbishop of Rheims, in 858, give information of gilds of that date in France in these words: "They shall unite for offerings (especially of candles), for mutual assistance, for funeral services for the dead, for alms, and for other deeds of piety" (4, p. l xxxi). These fraternities spread in the Middle Ages in great numbers, over all countries under the sway of the Roman Catholic Church. There were 12 in Norwich, as many in Lynn. Gallienus counts even 80 in Cologne, Melle about 70 at Lübeck, and Staphorst more than 100 at Hamburg (4, p. lxxxiii). Lambert says: "In Norfolk, the most densely populated county of England, Taylor is said to have counted no less than 909, and in Lyme Regis alone 75, though it is hard to believe that some exaggeration has not crept in here" (20, p. 106).

The most prominent characteristic of the early gilds was the religious element, because that was the form of social activity most encouraged. A social organization entirely divorced from religion would have been impossible, if it had been conceivable. So no matter what the specific *raison d'être* was of any gild, it necessarily had a religious aspect. Each had its patron, in whose honor candles were burnt. Some had as their object the aid of poor scholars, the maintenance of schools or the payment of schoolmasters, the presentation of religious plays, as even to-day that at Oberammergau in South Bavaria, or the repair of roads and bridges. The Frith-Gilds had rules for helping the gild-brothers in every need. The statutes of the English gilds frequently mention loans made to needy brothers, with but one condition, that it be repayed when there was no more need of it.

The social character of the early gilds is shown, among other facts, by the rule that women might become members. They were generally the wives and daughters of members. Again one person might belong to several gilds. Liveries came to be generally worn at the annual festivals. The religious element of fasting was alternated with the more convivial feasts and drinking-bouts. Still greater witness is borne to their fundamental basis in the love of sociability by the fact that when the Reformation, as Brentano says (4, p. xci), shook the system of gilds to its foundation and they were abolished in all Protestant churches, on the ground of having been founded in superstition, they were re-established for social purposes, with the religious elements left out.

These early social clubs had gained quite a strong foothold among the middle class by the eleventh century. This and the following century witnessed the rise of the gild formed primarily for business motives, namely the merchant gild, or gild-merchant. The first organization of merchants occurred, however, somewhat earlier in Italy. The institution may be traced back to the corporations of merchants and artisans which existed in Rome under Numa Pompilius, which were called *collegia*, or *corpora opificum et artificium*. These *collegia*, which by their constitution could be mobilized for military purposes, also bore the name of *scholae*. They suspended operations from the fall of Rome until the ninth century. In 825 Emperor Lothair issued his *Constitutiones Olenenses*, wherein eight cities of northern Italy were named as suitable centres of population for the establishment of new *collegia:* Bologna, Cremona, Florence, Ivrea, Milan, Padua, Turin, and Venice. In Ravenna, in 990, corporations of butchers, fishermen, merchants and others were regularly organized. Rome and Ferrara also had their corporations. The *Florentine Compagnie* were formed to counteract the power of the nobles. Each *compagnie* was made up of the families of merchants engaged in similar industries, and their work-people. In 1204 the gilds were a predominant power in the Florentine government. In 1236 a council divided them into the "Greater" and "Lesser" Gilds. In the upper class were: (1) Judges and Notaries; (2) Merchants of the Calimala; (3) Changers of Money; (4) Woolen Manufacturers; (5) Silk Manufacturers; (6) Doctors and Apothecaries; (7) Skinners and Furriers. The lower class contained 14 trades (33, p. 42).

In France the first gild-merchant was formed in 1070 at Mans, as a union of the free townsmen in order to protect themselves against the oppression of the nobility. The various names given the merchant gilds include *Amicitia* in Aire, *Vroedscapen* in the Netherlands, the *Hezlagh* in Sleswig, and the St. Canute Gild in Frensburg. Their original purpose was to obtain security from external danger, and to maintain peace in the interior of the towns. The development of commerce was paralleled by the increasing scope of the merchant gilds. For protection against bandits and against the nobility, alliances were formed between the merchants of different towns. The boatmen, or traders, of Paris formed the *Hanse des Marchandes de L'eau* whose privileges were confirmed by Louis VII in 1170, and those of Rouen formed the *Compagnie Normande*, which was dissolved by the king in 1458.

The merchant gilds are given the credit for the formation of the modern city. Brentano says there is documentary evidence that the gild of London was the model for the constitution given that city by Athelstan (4, p. xcviii). It is certain that the charters that constituted the communes were given by Louis VI and VII and Philip II to the local merchant gilds, which included in their membership all the free citizens. It was in the cities of the Hanseatic League, however, that the merchant gilds wrote their name most indelibly on history. The Hanseatic Confederacy was constituted of 80 of the most considerable places in Northern Germany and Holland, formed in the middle of the thirteenth century. Thus these simple social organizations, formed for mutual help, grew into giant commercial companies controling rich city governments. It was the power of these organizations which sealed the downfall of feudalism.

At the time of their origin there was no differentiation between the merchant and the craftsman. The artisan sold his own goods. As specialization arose craftsmen and tradesmen separated and formed gilds of their own. The weavers were the leaders among craftsmen. The gild of

Weavers of London was chartered by Henry I (1100-1133), as was that of Oxford. The wool-weavers gild of Cologne arose as early as the eleventh century. The time of the organization of the craft gilds, in general, may be said to extend from 1050-1350. The craft gilds then were contemporaneous, or nearly so, with the merchant gilds, and in principle they were fundamentally the same. The merchants developed power more rapidly, however, and became oppressive. In fact, by an exclusive limitation of membership they developed a patrician aristocracy, which looked upon power as a lucrative monopoly. Political conflict arose between the craft gilds and merchant gilds, in which the former were finally victorious in England and the continent about the time of Henry VI or the middle of the fifteenth century.

Since our interest is in the social character of these organizations we may overlook most of their economic aspects. It is important to note that the rule of Florence that every boy 16 years old was obliged to become a member of a gild or trade corporation, was generally the custom throughout Europe. To some extent there was developed fraternity between gilds of the same trade, extending over large areas. The most renowned of these was that of the building-lodges of Germany, started by Dolzinger, chief master at the building of the Strasburg Cathedral. The journeymen of the different trades formed separate gilds, in some instances, as the Journeymen-Bakers of Copenhagen, founded in 1403. In France, according to Rosiéres (29, p. 437), *compagnonages* were formed in the hard times of the fifteenth century. A journeyman was able to enter the *compagnonage* of his industry in whatever city he was. They had secret signs.

In the broad field of social education perhaps no institution has served its generation better than the gild. It worked hand in hand with the church in the performance of religious training. As a philanthropic institution it was the popular means of furnishing assistance to those in need, by gifts of money and loans without interest, insurance, and the payment for saying masses for the dead. The gild fostered music and the drama. There were in England several gilds the object of which was to develop music. The *Feste du Pin* was a gild of minstrels existing in northern England during the fourteenth century. A century later there was a gild of minstrels attached to St. Paul's Cathedral (20, p. 132). In Germany the *Minnesingers* and *Meistersingers* were the great creators of folksong, and exemplify the part played in the life of the people by the singing gilds all over Europe. Even more common was the rendition of religious plays in the churches and gild halls.

In the support of the schools themselves there was no more active agency than the gilds. Leach (21) has collected the documents referring to schools during the reigns of Henry VIII and Edward VI. He says, "Of the 33 gilds mentioned in these records, excluding the craft gilds of London and Shrewsbury and the Merchants' gild at York, 28 kept grammar-schools; and to them may be added the Drapers of Shrewsbury, who kept a grammar-school; while the Mercers of London were trustees for three schools mentioned, and the Goldsmiths for two. . . . . . A gild being established, and maintaining, as it almost always did, one or more priests or chaplains to say grace for the souls of its members, which office, like that of burial of their bodies, was one of the chief objects of the gild, either *proprio motu*, or at the discretion of the gild, kept a school" (21, p. 34).

A broad social education, training for performing the offices of citizenship and of society was furnished by these brotherhoods. The membership of the gilds included the whole family. J. Toulmin Smith prints translations of the charters of many of the English gilds. From these it is evident that women were members of merchant and craft gilds as well as of the more truly social and religious gilds. At Kingston, the Gild of the Blessed Virgin Mary was founded in 1357 by 10 men and 13 women, 10 of them being wives of the men (32, p. 155). The Gild of Corpus Christi at the same place, founded in 1338, included 18 women among its 43 founders. Sons and daughters, according to their charter, might enter the gild without any payment of initiatory dues (32, p. 160). At York, in 1408, the Gild of Corpus Christi had a rule reading as follows: "All of both sexes will be received, if of good fame and conversation" (32, p. 141). Sisteren as well as brethren are mentioned in the charter of the Gild merchant at Coventry, in 1340 (32, p. 226). Women belonged to the Gild of Kalenders, at Bristol; and this was primarily a body of clergymen (32, p. 287). The Gild of Fullers at Lincoln had women members in 1297 (32, p. 179). The Gild of Palmers of Ludlow, in 1284, enacted this interesting statute: "If any girl of the gild, of marriageable age cannot have the means found by her father, either to go into a religious house or to marry, whichever she wishes to do, friendly and right help shall be given her, out of our means and our common chest, towards enabling her to do whichever of the two she wishes" (32, p. 194). It would appear from the account given of the Scotch gilds by Bain, that the crafts-gilds, at least, were more restricted in membership. Not until 1700, he believes, were females allowed to share in the privileges. About that time women were allowed to set up in the tailor business in Aberdeen. The women were granted certain concessions and compelled to come within the jurisdiction of the craft, but were not permitted full membership (1, p. 256).

The same general conditions existed among the gilds on the continent. In Denmark the wives and daughters of gild members were also members, as sisters. The statutes show their participation in the banquets, sick-service, and funeral ceremonies, their offerings for saying mass, their contributions and penances (17, p. 133). Hegel says that women were most frequently mentioned in the early statutes, in Denmark (17, p. 133). In Upsala, the Erichsgild of the fifteenth century had sisters as well as brothers. "To the public feasts came also women and invited guests" (17, p.338). The most famous of the Parisian brotherhoods was *La Grande Confrèrie, Notre Dame.* It was founded in 1220 with a membership of 50 priests and 50 laity. Women were not to be allowed membership, with the exception of the Queen, Blanca of Castile, the wife of Louis VIII, and other women who could not be refused without offence. Four years later, however, the membership rule was changed to permit the entrance of 50 women, who should preferably be wives of burgerbrothers (17, p. 100). The membership lists of the Wine-Brothers of Cologne, in the fourteenth century, contain the names of wives, widows and daughters (17, p. 349). The Baker-Gild of Göttingen, in 1316, had at least one woman member (17, p. 413).

It is thus evident that the gilds provided social life for old and young, and at the time of their greatest prestige included members of the nobility. In the last half of the fifteenth century there were 12 liveried companies in England, which included in their membership sheriffs and mayors. Edward III was a member of the Linen Armourers. In parts of England to-day are found survivals of the annual processions which most of the gilds held on the day of their Patron Saint. In these, liveries were worn, banners of St. George and the Dragon, and of the Patron, were carried.

As an organization serving the purpose of satisfying the longing for sociability the gild existed, therefore, much longer than it did as serving an economic function. The merchant and craft gilds degenerated, that is, lost their distinctive character as such, beginning in the fourteenth century, and by the time of the triumph of the Reformation had disappeared almost entirely. As wealth increased, the demands for candidacy were raised and membership tended slowly to become hereditary. The spirit of capital, petty rivalries, and hateful egoism began to take the place of the great idea of association and solidarity under which they originated. The unimportant freemen of feudal Europe had become the rulers of the country, as wealth through trade and manufacture raised its possessors to a position of power equal to that possessed by those who inherited land. We will turn back now to trace the development of a different type of voluntary organization existing among the students of the period.

THE STUDENT SOCIETIES

We have mentioned the gilds of judges and notaries, doctors and apothecaries, organizing the practitioners in these professions. We found also Gilds of the Kalenders, or organizations of clergymen, which existed in almost every town. Their name is derived from their meeting-day, the kalends, or first of the month. There also existed gilds of scholars, generally known as universities. Rashdall says: "The rise of the universities is merely a wave of that great movement towards association which began to sweep over the cities of Europe in the course of the eleventh century" (27, V. I, p. 153). The student universities first appear among the non-Bolognese students resident at Bologna, representing an attempt on the part of the young men, who by leaving home had lost the protection of citizenship, to create an artificial citizenship. In exactly the same way foreign merchants and other strangers in an Italian town formed themselves into gilds, for the prevention of quarreling among themselves, and the promotion of their common interests. Denifle (11, V. I, p. 136) points out that there were *Universitates Judæorum* at Catania, Messina, Syracuse, and Trapani. Schulze (30, p. 9) calls the Bolognese organizations *landsmannschaftlichen Schutz-gilden* (national protection gilds). He points out the fact that the word *universitas* was used by other corporations, craft-gilds for instance, and not until the thirteenth century was it used to designate a school, which previously had been known as the *studium generale.* He dates the foundation of the University of Bologna as the middle of the twelfth century when the existence of the corporate tendency among the students first appeared (30, p. 9).

At Paris also the university was a modified gild; here of teachers, as contrasted to the gild of students existing at Bologna. Brunner (5) says that the prototype of the faculty organization at Paris is to be found in the craft gilds of German jurisprudence. Rashdall says that the masters united by a bond of customs formed gilds (27, V. I, p, 284). The idea of a corporation of teachers, he says, in all probability arose out of the idea of Inception, as perhaps other gilds may have arisen out of similar initiations. Gradually the ceremony passed from mere jollification into a solemn and formal admission of a new master into an organized corporation of teachers. And the trades-union of teachers soon gained a monopoly. The similarity of the inception into the doctorate and into knighthood is evidenced in some of the Spanish universities where the new doctor was actually invested with a sword; in all universities the ring formed one of the insignia of the doctorate, and at Vienna the preliminary bath of the candidate for knighthood appears to have been imitated by candidates for degrees. The degree at that time had more the significance that it bears now in the secret fraternity or lodge than that borne in the university. The degree was granted at the commencement of the teaching career and was the sign of admission to the profession.

The earliest universities, then, were voluntary organizations, bearing most of the characteristics of gilds. There were two types, the Bolognese, where the initiatory steps were taken by the students, and the Parisian, where the teachers were dominant, and the students were what Dolch calls *Angehörige* but not *Mitglieder* (12, p. 25); nominally they were members, but actually they had but very little power. Later universities were of a mixed type. To be sure there was less differentiation at that time between those who learned and those who taught.

The different authorities present different pictures of the organization of the universities, largely because of the fact that the organization was very loose, and that it changed its character with the years. Schulze gives a very good diagram outline of the *studium generale Bononiense* (30, p. 10). The Studium Generale was divided into The College of Doctors, The Student Organization, and the College of Theology. The division of the Student Organization is shown in the following diagram:

Universitas Scholarium

Law Corporation — Arts Corporation

The Citramontanes — The Ultramontanes
3 Nations — 14 Nations

The early student body consisted of law students from outside of Bologna. The Arts Corporation developed subordinately and the Theology Corporation was not connected with the university until 1362. From the middle of the thirteenth century the Law Corporation consisted of two distinct but allied gilds, or as they were actually called, universities, the *Citramontanes* and the *Ultramontanes*. These were made up of *nationes*, groups of students coming from different territorial divisions bound into clubs. The number of nations varied from time to time, the *Ultramontanes* containing as many as 14; the *Citramontanes* containing only three. The College of Doctors, or the teachers, were not included in the *Universitas Scholarium;* they formed a separate gild.

In early days the nations, which may have antedated the two federations, were distinct corporations with statutes, officers, and meetings of their own. But with the exception of the Germans, they later lost much of their autonomy. Charles V granted the German nation his especial protection, and gave their procurator the rank of Count-Palatinate. Pope Gregory XIII granted the German students all privileges and freedoms of the *Bononischer Senatorem.* Another right of this nation was that every fifth year the rector should be chosen from among them.

Every nation elected at its head a proctor, or procurator, and one or two *consiliarii.* These national associations retained the more homely nature of clubs for mutual protection, assistance, recreation, and for the performance of those religious functions which in the Middle Ages supplied the sanction for every social bond and the excuse for every convivial gathering. In the statutes of the German nation the object of the gild is declared to be: "the cultivation of fraternal charity, mutual association and amity, the consolation of the sick and support of the needy, the conduct of funerals and the extirpation of rancour and quarrels, the attendance and escort of our *Doctorandi* to and from the place of examination, and the spiritual advantages of the members" (27, V. I, p. 161). The treasury was supplied by entrance fees, and was depleted by convivial and religious expenditures.

At the head of the university was the rector, just as the other gilds had their rector. He was required to be a secular clerk, unmarried, wearing the clerical habit, of five years standing in the study of law, and at least 24 years old. In the sixteenth century the rectorship declined. On account of the expenditure attached to the office it was hard to get candidates. The whole student body met in a congregation, with a constitution.

In the institution of rector at Bologna we see the embodiment of the supremacy of the student gild over that of the faculty. In the early days the students did not control the situation, but the two gilds existed side by side, each with its own rights. The Doctors of Bologna formed their gild as early as did the Masters of Paris, and always maintained their right to determine the examinations into the qualifications of candidates for admission into the profession. It was merely by accident that the students appropriated the term *universitas*, and the Doctoral Gild became known as a *college*. The students, however, were mostly mature men, as contrasted with the boys at Paris, many of them being of noble and clerical rank. The professors were not lecturers of an established institution but were often private adventurer lecturers. The discipline of students was thus free and easy, but for the professors it was very strict. The teacher was fined if he broke any of the numerous rules, for absence or tardiness, or failing to cover the entire mapped-out curriculum. The professor had to take an oath of allegiance to the rector. In fact, the professors and the town authorities were bound to give the students their privileges; otherwise they might move to some other city, as they did at Prague in 1409. There was no university property. The general congregation and meetings for religious observances were held in the cathedral.

The foundation of Paris University in the reduction into a regular code of the unwritten customs of the Gild of Masters, or professors, was not earlier than 1150. Schulze (30, p. 9) outlines its organization as follows:

PARIS UNIVERSITY

THE THREE HIGHER FACULTIES

I. Theology.
II. Jurisprudence.
III. Medicine.
and
IV. The Faculty of Arts.
(comprising four nations)
1. Gallic or French.
2. English (later German).
3. Picardian.
4. Norman.

At Paris the Faculty of Arts was dominant. The term *nation* was first used in Paris in 1222. They were four in number: (1) French, including Spanish, Italians, and Greeks; (2) English, after 1430 the German, including both nationalities; (3) Picard, including those from the northeast and the Netherlands; (4) Norman (23, p. 78). The common rectorship was instituted by the united nations. Rashdall considers the evident purpose of the organization as that of gaining protection against oppression by ecclesiastical authority. Much later the four nations were subdivided into *Provinces* of *Tribes*, which had regular Deans at their head, and the votes of the national congregation were taken by provinces. Each of the higher faculties had a *Dekan* at its head. The rector had come, at least by the middle of the fourteenth century, to be the incontestable Head of the University, as well as of the united Faculty of Arts. Each of the Faculties constituted an autonomous corporation with its own Head, Bedels, Receivers, common seal, congregations, statutes, etc. But all scholars and graduates of the three superior faculties, with the exception of the masters, remained under the jurisdiction of the nations. The general congregation was composed of the masters of all the faculties, Theology, Jurisprudence, and Medicine each having one vote, and each nation one, thus giving the Arts Faculty four votes. The common treasury was filled by fees from new members, and any surplus was expended in a nearby tavern.

Another institution important in the study of voluntary organizations, because it developed into what we now call the college, was the self-governing *Hospicium* of Paris. The students of moderate means, before the establishment of the endowed *hospicia*, *bursen* or *collegia*, lived in groups with a master. The rich students lived in houses of their own with a private tutor, and the poorest herded together in some miserable garret. Rashdall's evidence seems to support the thesis that: "The original *hospicium* was a democratic, self-governing society, that its Head owed his authority to the free election of his fellows, and to the formal Statutes or traditional customs accepted in the Community, and that the Community always participated in the management of the common funds and the general government of the House" (27, V. I, p. 481). Gradually the university authorities transformed this régime into an absolute monarchy by organizing endowed colleges. The first was the *College des Dix-huit*, founded in 1180 (27, V. I, p. 483). The independence of the University of Paris lasted until the reign of Louis XI. In 1474 all the privileges of the university were suspended.

Bologna was the model for the formation of the other universities of Italy and Spain. Vicenza was founded by a migration from Bologna, in 1204. Five years later it had four rectors and as many Student-Universities. Another migration from Bologna in 1222 founded the University of Padua. In the other Italian universities the control quickly, if not from the time of foundation, passed into the hands of civic authority. In the later universities of Spain the constitution may be described as mixed, but on the whole belonging to the Bolognese rather than the Parisian type. At Salamanca rectors were elected in 1263. Masters and students were recognized as forming a university, which was to elect a rector whom they should all obey. He was required to suppress feuds and quarrels among the students and townspeople, or among the students themselves, and especially to enforce those cardinal but seldom observed rules of mediæval university discipline—that students should not bear arms or walk abroad at night. The old student liberties were better preserved in these Spanish sixteenth century statutes than in the Italian universities themselves. The statutes of 1300, at Lerida, show the student liberties and their domination over the professors in full operation. The Church exerted a greater control, however. All the Spanish universities, moreover, were created by the Crown, and are peculiar for their close relationship to the State.

The French universities were originally of Parisian type, later adding some of the Bolognese features. Such were Montpellier, Orleans, Angers, Toulouse, Aix and others. St. Andrews, in Scotland, in 1411, resembled the later condition of Orleans and Angers. Masters and students united in four nations. Fife, Lothian, Angus, Aberdeen, Glasgow, Clydesdale, Teviotdale, Albany, and Rothesay were theoretically founded on the same line, but here the nations were of much less importance.

Parisian example was early imitated at Oxford. There were, however, only two nations, the *Boreales*, those living north of the Trent, and the *Australes*, those living south. The two proctors were first heard of in 1248. After 1274 the term nation ceased to be used. At Cambridge there is no record of nations, but that may be because all the records were burned in the town and gown riots in 1381.

The first German university was Prague, founded largely on the Parisian model, as were the other universities of Germany, though in these schools the students were much more powerful than at Paris. At Prague and Vienna there were four nations subdivided into provinces. At the head of the nation stood the *Procurator*, of the province stood the *Dekan*. The union of procurators chose the rector of the university, according to Barnstein (2, p. 10), though Rashdall says that at Vienna the students and masters all participated in the election of the rector. Later however, he adds, this power was concentrated in the masters (27, V. II, p. 217). Here is a point on which the authorities differ. The historian Raumer (28, V. VI, p. 18) furnishes evidence which seems to discredit Rashdall, by referring to the charter of foundation issued to Vienna by Duke Rudolph in 1365, and the definition made by the university itself the following year, in which it was expressly stated that their model was the University of Paris. The names of the four nations given at that time were: (1) the Southern; (2) the Saxon; (3) the Bohemian; and (4) the Hungarian. This division was modified by Duke Albrecht in his charter of 1384, making the (1)st Austrian; (2) Rhenish, including Bavaria, Suabia, Alsace, Franconia and Hesse; (3) Hungarian, including Bohemia, Moravia, and Poland; and (4) to include Saxony, Westphalia, Prussia, etc. At Prague the names of the nations were: Bohemian, Bavarian, Polish, and Saxon, according to the division of Charles IV, in 1348. The later being almost exclusively German outvoted Bohemia in university questions. This irritating the Bohemians, they petitioned the Emperor Wenceslaus in 1409, with John Huss and Jerome of Prague at their head, to decree that henceforth the Bohemian nation should have three votes. This led to bloody strife and a migration of 5,000 German students and masters from Prague to the city of Leipzig, where they founded that great university.

At Leipzig the four nation system was established and retained its hold until 1830 (2, p. 64). They were called the Meisnian, Saxon, Bavarian, and Polish. Ingolstadt was founded in 1472 with four nations, the Bavarian, Rhenish, Frankish, and Saxon. Erfurt, founded in 1379, was the first of the Parisian type in whose constitution the nations disappear entirely. At Heidelberg, Paulsen assumes that they had no real importance, though such a division is mentioned in the foundation charter of 1385 (27, V. II, p. 248).

In place of the national type of organization the *bursen* appear as the characteristic development of the fifteenth century (2, p. 11). In Germany, however, instead of being endowed dining-halls for poor students as at Paris, they were *privatpensionates* the use of which was obtained by force. At the head was a *bursenrector*. Each new member must pledge to obey the rules. Only Latin could be spoken in the *bursen*. Most of them were not schools of diligence and virtue, Barnstein says, but of idleness and vice (2, p. 13).

The University of Cracow, founded in 1364, was entirely of the Bolognese type, and full student rights were conferred. Pressburg was also of this general type.

These great voluntary organizations which started the university movement reached the height of their development in the cities where they originated, at Bologna, the great student gild, copied in Italy, Spain, and Poland, and at Paris, the great teacher gild, imitated in France, England, Scotland, and Germany. In Germany the nations played but a small part; as Schulze says, naturally giving the dominance to the teachers in the faculties and the *bursen*, and the passive choice of the scholars in the university congregation had practically only a decorative value (30, p. 55). As a matter of fact the German universities, those of Scotland, Scandinavia, and to some extent those of Spain, were formed by the decree of state or church authority, and on this account the nations were not the spontaneous groupings found in the earliest universities.

As a result the students formed organizations of their own. Not having the important affairs of the university to attend to, they performed the other important function of supplying satisfaction of the social needs. These societies were more or less secret, according to expediency. In 1477 at Pavia, and in 1514 at Leipzig these formerly unknown organizations came to light. At that time secret or public unions were forbidden, either within or without the community. Thus the custom of initiation or *bejaunus* was at first prohibited. But as Rashdall says: "It gratified alike the bullying instinct, the social instinct, and the desire to find at once the excuse and the means for a carouse" (27, V. II, p. 628). Later this custom became tolerated and finally prescribed for all new students. An initiatory ceremony peculiar to Germany was known as the *deposition*. This developed into a system of *pennalism* which made the freshmen veritable slaves of the older students. As these customs were not definitely associated with any voluntary and systematic organization, but existed more as school traditions, they need not be more fully described here.

LEARNED AND RELIGIOUS SOCIETIES

Closely associated with the student societies were the learned academies. Conradi has gathered together material on this subject, covering the field very thoroughly (9). Learned academies appeared with Humanism in Italy, and spread into Germany and France, where they developed religious characteristics. It was here that heresy was very often born and cultivated. Many had as their avowed purpose the cultivation and purification of the vernacular language. It was impossible, however, to prevent among these intellectual leaders discussion of the newer conceptions of science and philosophy. There was therefore a close connection between the learned societies and the heretical sects of the Reformation. Conradi includes the Bohemian Brethren and the Waldensians in his list of learned societies. The most accurate method of treatment, therefore, is to take them as they existed without attempting to dissect them, or separate the educational from the religious elements. Ludwig Keller says: "From the earliest Middle Ages the Christians formed themselves into gilds and brotherhoods of handworkers. They were, far into the Middle Ages, looked upon as heretics, largely because of their secret characteristics; certain ideas and forms which were prescribed secretly by hereditary transmission. Döllinger, in his *Beiträgen zur Sektengeschich tedes Mittelalters* says that the *Manicäher* had their strongest adherents among the weavers of Toulouse and that neighborhood, who were in the local folkspeech called *Arriens;* on that account the sect was given that name'' (19, B. 5, s. 95).

The most important of these early sects of heretics was the Waldensians. They probably began existence with Valdo of Lyons, in the twelfth century. Their stronghold was in the Piedmont and the secluded valleys of the Alps. The first measure for their general destruction was taken in 1209 (24, V. I, p. 28). Keller says that to these is due the introduction of a secret sign of recognition in mutual greetings and handshaking. Many adopted these signs after the persecution in 1387. The men's grip was given through a sign with the little finger. The women touched the finger-tips (19, b. 6, s. 341). Notwithstanding horrible persecution, they continued their social and community life through the centuries and still possess their Alpine valleys. Other opponents of the Papacy at this time were the *Cathari* or *Albigenses*.

In the same century the Bequine system of societies arose. As we follow this group of thinkers we see the formation of the Sect of the Free Spirit in the thirteenth century, and the Brothers of the Common Life, founded by Groot and Radewins about 1380. These latter gathered some people and formed a close community, occupying themselves with copying books and manual work. They built the first Fraterhouse and the first Sisterhouse. In distinction from the earliest houses of Bequines, community of goods and a more monastic life prevailed. They spread quickly, especially in Netherlands and northern Germany. Among others of their members was Thomas à Kempis.

The Hussite societies began about 1400, and in Great Britain the Lollards arose. Hussites and Waldensians allied, and many small religious societies sprang up as variations of these movements, such as, for instance, the Winkelers. More or less consecutively the Hussites developed into the Bohemian and Moravian Brethren.

Meantime the Italian academies were being organized. Conradi gives Plethon (1355-1450) credit for fathering the Platonic Academies (9, p. 394). Through his influence the Florentine Academy was founded. Brandi says that it had no constitution nor organization, but the bond that held the members together was love of learning, supplemented by the personal influence of the Medici (9, p. 396). The Academy met in the villas of the neighborhood and held an annual banquet on Nov. 7, Plato's anniversary. Numerous other academies, perhaps 700 in number, were formed similar to that at Florence. The Roman Academy is associated in its origin with Laetus, who was born in 1428. The close relation between the academies and the sects is evidenced in that the Roman Academy was dissolved in 1468, because of trouble with Paul II over heresy. It was re-recognized three years later by Sixtus IV and large numbers joined it. Besides this public academy, however, in which high scientific ideals could with difficulty be furthered, there was a separate though inner secret academy, also under the leadership of Laetus. In these societies friendly sociability was present as well as literary debate.

In Germany the name standing out most prominently as an organizer of literary societies was Celtis (1459-1508). The *Sodalitas Rhenana* or *Celtica* was formed between 1487-91, a humanistic society which brought together the noblest minds of the Rhine country. The Society of Vienna was the centre of humanism in the valley of the Danube. Other societies followed in other cities. They devoted themselves to poetry, the publication of classics, the cultivation of the vernacular; but some of their members devoted themselves to astrology, cosmography, alchemy, etc. Some were printers, sculptors and painters. Others of these societies devoted themselves more exclusively to the discussion of religious questions, the most famous being the Bohemian Brothers and the Anabaptists.

The Bohemian Brethren received definite organization about 1456. A century later they were expelled from Bohemia, and seven years after this formed a durable union with the Genevan Church in Poland (6, V. II, p. 636). "The evangelical churches of this period had three degrees of membership, *Socii*, *Fratres*, and *Perfecti*. The *Perfecti* elected the members who supervised the whole temple. The *Fratres* formed a kind of academy. Keller thinks that many churches consisted of only *Socii* who did not know that they formed part of a ring of heretics." Conradi adds, "Often these churches, especially when religious storms were raging, existed only as literary societies, or as inner circles of legalized organizations, laboratories of princes and printing offices"(9, p. 405). The Bohemian Brethren cultivated music and poetry, mathematics and natural science as well as the vernacular, and aimed also to be apostles of good will among men. The life of Comenius illustrates the nature of the work done during their later history.

The other important religious sect at this period was that known as the Anabaptists. They were in sympathy with the Bohemian Brethren in most doctrinal questions. Keller tells us that adult baptism was practised by various craft gilds, by the *Meistersingers* and by some of the academies of natural philosophy, in their ceremony of ordination (19, b. 5, s. 99).

As a distinctly religious movement Anabaptism began with Nicolaus Storch, Marx Stübner, and Thomas Münzer, who arose as reformers in 1521. Baptist communities became very numerous. There were 86 in Moravia between 1526 and 1536 (16, p. 68). The peculiarity of these societies was their communism. Large dwelling-houses were built which contained from 400 to 600 persons; one numbered 2,000. Under the system which Huter is mainly credited with developing, there was over each household one who took the general superintendence. Each household had a common kitchen, a common bakehouse, a common brewhouse, a common schoolhouse, a common room for child-birth, another for mothers with young infants, and a common nursery with community nurses. Other sisters attended the sick. The young folks were strictly kept from the world, no mixed marriages being allowed. No idler was permitted in the community. The meals were common, but each family had its own rooms. In the morning after silent prayer, they all went to work, some in the fields, some in the workshops. They put their wages in the common box, which was under the care of a treasurer. It is said that the Moravian communities at this time numbered 70,000 persons (16, p. 70). In 1535 they were driven out of Moravia and Huter was burned at the stake.

Baptist communities were organized all over Germany and the Netherlands. The most famous was that at Münster, where in 1534 they got control of the city and established a community of goods. They resisted the established church for a year but finally the city fell, and a terrible slaughter ensued. Minor divisions of Baptists split off in different directions. Among these were the Melchiorites and the Mennonites. To follow out this line of historical development would lead to the formation of the religious societies of to-day, Lutherans, Episcopalians, Presbyterians, Huguenots, Congregationalists, Friends, etc.

At the time the Bohemian and Moravian Societies were suppressed there were two important types of societies in Germany, the *Sprachgesellschaften* and the Societies of Natural Philosophy. The most prominent of the former class were the *Fruchtbringende Gesellschaften*, sometimes called *Der Palmbaum.* Their purpose was furtherance of good conduct and improvement of the German tongue. Their chief literary work was translation, with emphasis laid on form. Two German grammars were produced, one by Schottel and one by Gneinzius. The Paumbaum was secret, being unknown during the first thirty years of its existence. In 1673, when first publicly known, it had 789 members, of whom some were German princes and a number were scholars like Opitz. Other language societies modeled after these were: (1) *Die Aufrichtige Gesellschaft von der Tannen,* 1633; (2) *Die Deutsche-Gesinnte Genossenschaft und Die Neun-Stündige Häussenschaft,* founded by Zesen, 1643-4, in Hamburg; (3) *Die Pegnitz-Hirten Gesellschaft,* founded in Nürnberg by Harsdörfer in 1642-4; (4) *Der Elbische Schwanen Orden,* founded by Rist in 1656.

The seventeenth century saw the establishment of the societies of natural philosophy in all the principal centres of population. As to their influence I may quote Keller: "These secret working unions of learned men, poets and philanthropists have had greater influence on the development of the mental life than was formerly recognized. These free academies to which such men as Bacon, Boyle, Galileo, Leibniz, Comenius, and others belonged, and of which Cromwell, Oxenstierna and other statesmen were members have been the transmitters of general philosophical and religious thought" (19, b. 5, s. 67).

A description of the various orthodox societies within the church might have been included, beginning with the Benedictines (sixth century) and their offshoots, the Carthusians, the Cistercians, Grandmontanes, Clugniacs, Premonstratensians, Feuillans, Trappists, and Maurists, and the two great movements of the thirteenth century, the Dominicans and Franciscans, and that other powerful organization, the Jesuits. These societies had great social influence and were the founders of many schools. To a certain extent they were voluntary organizations. Their effect was conservative and reactive, and being the backbone of the Church, association for protection was unnecessary, association for philosophical and literary argument uncongenial, for the practices of sociability unclerical. They were of less importance, therefore, in the great evolutionary movement which was the great effect of the gilds, the universities, the learned and religious societies.

Summary and Conclusion

It is very evident that histories of education and social life have not appreciated the service rendered by the voluntary associations of the people to the development of modern civilization. Through spontaneous organization merchants were able to sucessfully combat the oppressive nobility, to obtain from them charters for cities, and finally a part in the national governments. Craftsmen by union developed an efficient apprenticeship system and skilled workmanship, built the great cathedrals, and ultimately became the captains of industry. These and the more truly social gilds supplied the recreation for the great mass of the population, and cultivated art through the drama and music. They were the agency for inculcating the spirit of co-operation, and mutual helpfulness, and to a great extent determined the standard of social ethics. The voluntary organizations of students and teachers became the universities, the preservers of ancient culture and the source of higher learning. The Reformation was due not alone to individual leaders, like Luther, Calvin, and Zwingli, but to voluntary organizations like the Bohemian Brethren and Anabaptists. The evolution of scientific thought was due very largely to the learned societies and the discussion which they stimulated. Keller says, moreover, that it is in these societies, and not in the universities, that we may look for the birth of the newer German literature (9, p. 417). Those who would emphasize social education to-day, therefore, may find in these *Arbeitsgemeinschaften* many suggestions of value in the solution of present day problems.

BIBLIOGRAPHY

1. BAIN, EBENEZER. Merchant and Craft Gilds, a History of the Aberdeen Incorporated Trades. Aberdeen, 1887. 360 p.
2. BARNSTEIN, A. P. Beiträge zur Geschichte und Literatur des deutschen Universitäten. Würzberg, 1882. 88+156 p.
3. BEARD, CHARLES. Sects of the Reformation. Lecture VI, of The Reformation of the Sixteenth Century. London, 1903. pp. 184–224.
4. BRENTANO, LUJO. On the History and Development of Gilds. Pub. with Smith's English Gilds.
5. BRUNNER. Der Anteil des deutschen Rechtes an der Entwickelung der Universitäten. 1896.
6. CAMBRIDGE MODERN HISTORY. Edited by Ward, A. W. et al., London, 1902–09. Vols. I—III.
7. CAWSTON, G. and KEANE, A. H. The Early Chartered Companies, 1296–1858. London, 1896. 329 p.
8. COMPAYRÉ, G. Abelard and the Origin and Early History of the Universities. New York, 1897. XII+315 p.
9. CONRADI, EDWARD. Learned Societies and Academies in Early Times. *Ped. Sem.*, 1905. pp. 384–427.
10. COOLEY, CHARLES H. Social Organization. New York, 1909. 426 p.
11. DENIFLE, F. H. S. Die Entstehung des Universitäten des Mittelalters bis 1400. Berlin, 1885. 132 p.
12. DOLCH, OSKAR. Geschichte des deutschen Studententhums. Leipzig, 1858. 399 p.
13. GREEN, A. S. Town Life in the Fifteenth Century. London, 1894. 2 vols.
14. GROSS, CHARLES. The Gild Merchant; a contribution to British Municipal History. Oxford, 1890. 2 vols.
15. HARTWIG. Untersuchungen über die ersten Anfänge des Gildenwesens, in Forschungen zur deutschen Geschichte, ed. by Waitz. Göttingen, 1860. Vol. I.
16. HEATH, RICHARD. Anabaptism. London, 1895. 194 p.
17. HEGEL, KARL. Städte und Gilden der Germanischen Völker im Mittelalter. Leipzig, 1891. 516 p.
18. KELLER, LUDWIG. Die Anfänge der Reformation und die Ketzerschülen. Untersuchungen zur Geschichte der Waldenser beim

Beginn der Reformation. Monatshefte der Comenius-Gesellschaft, 1896. pp. 249-309.

19. ——— ———. Articles and Notes in the Monatshefte der Comenius-Gesellschaft, 1892.

20. Lambert, J. M. Two Thousand Years of Gild Life. Hull, 1891. 414 p.

21. Leach, A. F. English Schools at the Reformation, 1546-8. Westminster, 1896. 346 p.

22. Möller, Wilhelm. History of the Christian Church. London, 1893, 1900. Vols. II and III.

23. Mullinger, J. B. The University of Cambridge to the Accession of Charles I. Cambridge, 1873, 1884. Vol. I, Chap. IV.

24. Muston, Alexis. The Israel of the Alps. A Complete History of the Waldenses. London, 1866. 2 vols.

25. Newman, A. H. Recent Researches concerning Mediæval Sects. Am. Soc. of Church History, Vol. IV.

26. Paulsen, Fried. The German Universities. New York, 1906. 451 p.

27. Rashdall, Hastings. The Universities of Europe in the Middle Ages. London, 1895. 2 vols.

28. Raumer, Karl von. Geschichte der Pädagogik. Gütersloh, 1882. (Translated in Barnard's Am. Jour. of Educ., Vol. VI and VII.)

29. Rosiéres, R. Histoire de la Société Française au Moyen-Age. Paris, 1880. Vol. II.

30. Schulze, F. and Ssymank. Das deutsche Studententum von den altesten Zeiten bis zur Gegenwart. Leipzig, 1910. 487 p.

31. Sheldon, Henry D. The History and Pedagogy of American Student Societies. New York, 1901. pp. 1-36.

32. Smith, J. T. ed. of English Gilds; the original ordinances. London, 1870. 483 p.

33. Staley, Edgcumbe. The Gilds of Florence. London, 1906. 622 p.

34. Trail, H. D. and Mann, J. S., editors, Social England. London, 1902. Vols. I, II, and III.

35. Unwin, George. The Gilds and Companies of London. London, 1908. 397 p.

36. Wilda, W. E. Das Gildenwesen im Mittelalter. Halle, 1831. 209 p.

WHAT IS EDUCATION

By Paul R. Radosavljevich, New York University

I

The problem of education is of such magnitude, importance, and difficulty that all through the ages it has claimed attention, but has not been satisfactorily solved. The high mark of disagreement is reached when our leading thinkers attempt to answer the question: What is Education? For proof of this statement we need but turn to the history of education. Every pedagogical writer formulates his own aim and works out his own principles to support this aim. One aim is pietistic; a second is practical; a third is philosophic; a fourth is scientific; etc., etc. And to one's great surprise, they all claim to be right. Thus Montaigne and Locke firmly believe in physical education. Rousseau points out the principle of adaptation to nature. Basedow, Campe, Salzman, Trapp, and Dositheus Obradovich plead for happiness and usefulness in life. Herder is for the humanities; Spencer and Francke for piety and holiness; Niemayer for perfection and harmonious development; Pestalozzi for the training of the mental powers and general human education; Diesterweg for self-activity for the sake of truth, beauty and goodness; Runholzer for freedom and goodness; Denzel for self-culture; Krug for a strong intellect and a free will; Herbart for moral character; and so on *ad infinitum.*

I could continue this enumeration, including ancient as well as modern educators, but it would be difficult, indeed, to find a single case of agreement. This does not mean that all hope is lost. Other sciences have been in a similar chaotic condition, yet they have developed into what they are to-day.

Scientific pedagogy may be called the scientific expression of every movement that contributes to education, both in theory and in practice. Each movement tried to force its aims and principles upon the current pedagogy. Not only this, but other movements were not tolerated. These historical contrasts in the aims of education are due to: (1) the natural sciences, (2) philosophy, (3) religion and ethics, (4) politics and national influence. All these made their due claims upon the curriculum and won out. All these educational doctrines are neither fortuitous ideas nor events without significance. We have to study them most carefully.

II

All these conflicting historical conceptions and aims of education we may classify under the following pedagogical movements.

1. The Intellectual Movement in Education

As its name suggests, this movement is for intellectual education. The highest kind of intellectual education is that which trains the reason for the sake of developing judgment and logical thinking. The ideal was the scientific schooling of the child. The child's judgments are to be based as much as possible on his own experience and elementary knowledge.

This movement originated in a false metaphysical psychology which claimed that psychical life consists of ideas. It was supported also by the false and one-sided conception of virtue. It had its champions even among the Greeks. Socrates believed that knowledge is virtue. Aristotle, on the other hand, separates knowledge from virtue. Intellectualism was accentuated in mediæval times by Descartes and Spinoza. To them the process of thinking was of primary importance, and feeling (emotion) and volition were but phases of thinking. The latter claimed that complete development of thought and reason is manifested only by those who show full control of their passions.

The central idea of the Renaissance was that the knowledge of virtue makes virtue. Leibnitz, Wolff, and Hegel supported this view. Kant was opposed to it. Basedow said that through reason the reason must be developed. Pestalozzi was also an intellectualist, but only in his "Lienhard und Gertrud." He hoped to kill superstitution by intellectual enlightenment. Later he changed his educational doctrine to become the greatest exponent of the so-called pedagogical formalistic movement.

2. The Utilitarian Principle in Education

This pedagogical utilitarianism is a sort of subdivision of the intellectual movement. Many philanthropists, especially Basedow and Francke, were in this movement. Herbert Spencer was also an ardent supporter of this movement but, of course, from the standpoint of practical evaluation. Herbart included some of this utilitarianism but it was strongly colored with ethicism.

3. THE ÆSTHETIC MOVEMENT IN EDUCATION

This is a very old movement. Among the ancients æsthetic education was the chief and only aim. The ability to speak, to dance, to sing, to wrestle, etc., was the goal of the Greeks and Romans. In the 19th century, a group of artists brought this movement again to the surface. They believed that this education is not only æsthetic, but that it is also moral. Schiller and Schelling are the great representatives of this great movement. They are entirely too extreme in their statement that art is the highest accomplishment of man. Many of the modern philosophers are of the same opinion. Among these are Schopenhauer, Richard Wagner, and Nietzsche.

Even to-day this movement has a strong hold on educators. Konrad Lange, Seemann, Lichtwark, Hirt, Linde, C. Schubert, the Dresden Congress of Educators, and many others argue vehemently for this movement. But this movement and its supporters are very presumptuous. It is presumptuous to ask that all school children be trained as dilettanti, acquiring the artistic sensibility without putting it into practice. It is presumptuous to require all school children to be sort of middlemen between art and the common people. It is presumptuous to believe that a child can make use of the general principles which are dominant in our nature. A uniform education of all the people is a Utopia. It is a presumption to act on the belief that a uniform education of all people will enable them to see all that is beautiful and strive for all that is good and true.

4. PEDAGOGICAL ETHICISM (Ethical aim in education)

This is a one-sided ethical movement that is brought to the support of certain pedagogical aims. It accentuates ethics, which is strongly advocated by Kant. Kant says that the moral nature, the ego, is the most important thing in man. The fulfillment of a moral duty is, therefore, the highest aim of education. Other supporters of this movement were Fichte, Lotze, Schleiermacher, and Herbart.

5. PEDAGOGICAL CONFESSIONALISM (Sectarian religious aim in education)

This movement was championed by many pietists and some philanthropists. Later it was revived by Palmer and Graser. Confessional Christianity formulated the aims and theories of school instruction and education. This movement is still upheld by many Catholic Theologians.

6. PEDAGOGICAL HUMANISM AND REALISM

This movement has more to do with secondary than with elementary education. Realism requires that all education be placed on a realistic basis (natural sciences and modern languages), while humanism demands instruction in the classical languages (Latin and Greek), literature and history. This movement is still very strong in Europe. But its field and influence are limited more and more by the recognition of the natural sciences. In many of the European "Reform Gymnasiums" the natural sciences are given precedence over the ancient languages.

7. PEDAGOGICAL INDIVIDUALISM AND SOCIALISM—INDIVIDUAL AND SOCIAL (CULTURE, UNIVERSAL) PEDAGOGY

This contrast comes from politics and not from pedagogy. The second cannot crowd out the first, because social pedagogy is based on pedagogical individualism. The representatives of Pedagogical socialism are Natorp, R. V. Stoy, Bergmann, Auguste Compte, Rissman, Scherer and others. Natorp in his *Sozial Paedagogik* believes with Pestalozzi that the aim of education is socialization. The determining factors of education are found in the community. He believes that the apparent hiatus between pedagogical individualism and pedagogical socialism may be bridged by the fact that the community is indissolubly identified with individuals, just as the individuals are ever part and parcel of the community. Pedagogical individualism, on the other hand, starts with the relation between teacher and pupil, and not with the relation between school and society.

Since its birth, in the middle of the 19th century, social pedagogy has claimed that the individual conception of education is superfluous. The individual as such, does not exist. The individual is a pure abstraction. We know that all sciences deal with abstract terms. If an object or natural phenomenon is to be treated scientifically a good many abstract terms will be used. Social pedagogy deals also with abstract terms or concepts: society, community. According to this pedagogy society is something real; an individual man does not exist, he is only an abstraction. But we have to keep in mind the fact that the term abstraction has two meanings: First, abstraction is putting out of view the concrete conditions in observing concrete facts (objects and phenomena). Second, abstraction is the process of building up abstract logical concepts. The false conclusion of social pedagogy is due to the confusion of these two meanings. Many social pedagogues do not care for this distinction. The summation of pure phenomena cannot lead to something real. According to Bergmann's "Sozialpädagogik" society is real and the individual is phenomenal. But we know that ethical problems are always studied with reference to individuals and later with reference to society or applied to it. Social pedagogy must perforce await the development of individual pedagogy and then serve to supplement it.

In order that social education be recognized and developed beyond the somewhat narrow limits established by Natorp and Bergmann, O. Willmann in his book: "*Didaktik als Bildungslehre*" proposes a conception of civilized life which is to supplement not only egoism but also altruism (sympathy) by an appreciation of social associations. According to this theory, the possessions which are transmitted by means of education and instruction represent not mere collections of separate entities, but rather organic forms endowed with inherent life, and even the most minute details of pedagogical theory must be imbued with this idea.

According to individual pedagogy, the teacher is the educator, the moulder of the child. According to Willmann's social pedagogy, a teacher is the representative of previous generations, the culture possessions of which he is to give to the child. "Education is nothing more than a transmission of culture wealth from one generation to another," says Willmann. A teacher is the representative of a social will which has to be realized in an individual by means of the total consciousness of society or the state. In this sense, all state employees are to some extent teachers to the individual.

The main point in social pedagogy is the duty or loyalty of the individual to society. Individual pedagogy looks to the school as the means of educating the child; social pedagogy says that the school is only the result of social organization. According to individual pedagogy, the aims and purposes of education are individual ideals toward which the teacher is working; the aims of social pedagogy are expressions of the total will of the community and state. The whole educational problem depends upon the point of view from which it is solved. The specific educational problems fall under the individual point of view (relation between teacher and child). Social pedagogy deals only with the relation of pedagogical facts to any other department of life. Moreover, in social pedagogy, the purely pedagogical problems are not touched at all. The only value of social pedagogy is its influence in supplementing the individual pedagogical problems; it can never serve as a substitute for individual pedagogy.

The relation between teacher and child is the prime factor in all pedagogy, and this relation is an individual one; a relation between individual and individual. This relation may later take into account the community, but first and foremost the relation is purely individual. There may be many pedagogical facts which cannot be solved and are not even touched by social pedagogy. I mean here all those problems which arise from the child's psycho-physical nature. These problems are treated only by individual pedagogy, the representatives of which are very numerous:—Meumann, Stern, Schulze, W. E. Lay, Thorndike, Colvin, Burt, Burnham, Partridge, Whipple, Seashore, Winch, Scripture, Goddard, Binet, Simon, Schuyten, Swift, Messmer, Henri, Biervliet, Claparède, Netschajeff, Roumyanzeff, Sancte de Sanctis, and many other American and European original contributors.

8. Pedagogical Formalism and Materialism—Development of Mental Abilities or Knowledge and Skill

This educational conflict is still unsettled. According to the formalists the aim of education is to develop the child's mental powers: attention, memory, observation, reason, imagination, will, etc., regardless of what material or subject matter is used. Formalism does not believe in teaching history, natural science, geography, etc. Its object is only to develop and train the child. The teacher is to develop the child's abilities in the very best ways, by the very best methods, regardless of how many facts he pounds into him. If during this development one can use means which at the same time teach facts, so much the better. The culminating point of this theory was reached by the great "father of modern pedagogy," J. H. Pestalozzi.

The public school of to-day considers primarily the evaluation of knowledge and skill; it is materialistic in its curriculum. But both of these extremes are one-sided. Here we must thoroughly understand what is meant by intellectual education. It must be discussed on a pedagogical basis showing that there are immediate (primary) and mediate (secondary) aims of education. In school, formalism and materialism, as well as other pedagogical principles, must be based on scientific investigation.

III

What is the *scientific* movement toward defining the nature of education? There are three scientific conceptions of education:

1. *One-sided Historical Conception of Education.* This movement is championed by Otto Willman. Very much like social pedagogy, it considers education as a tradition and transmission of the thoughts and ideals from one generation to another.

2. *The Psychological Conception of Education.* The followers of this conception argue that education is but applied psychology. Most of these are either too engrossed with the subject of psychology or they are poor practical teachers. Münsterberg rightly ignored all such pedagogies. However, recently, in his book "Psychology and the Teacher," he abandoned the idea of autonomy of education as a science. Meumann and his school clearly show that the point of view in pedagogy is different from that in psychology. Yes, pedagogy has to make its own bread and not wait for the crumbs falling from the tables of the psychological laboratory. To-day there should be few who agree with Sully, who openly says that the real and only business of the teacher is to take the "principles" of the psychologist and to clothe them with "concrete" and "practical" illustrations. Why, is it not true that to different systems of psychology correspond different systems of education?

3. *Evolutionary Conception of Education*, or, *Developmental Pedagogy.* This movement originated with Herbert Spencer, who tried to apply the principles of evolution to all the sciences and to education as well. In his book on "Education," however, he is very brief with his biological principles and too general. The first assumption of all education is the education of man according to the dictates of nature. The natural education we receive without our knowledge or will. Therefore, pedagogy is to have a biological basis. Conseqently, education is a planned and guided development according to natural biological laws and conditions of evolution. But what is this development? It is the observation of *conditions* and *processes* (according to Spencer *evolution* includes both growth or a gradual, natural increase of bulk, and *development* or an equally gradual natural change of structure, form and self-mobility). What are these conditions and processes? The conditions are:

a. VARIATION—continued changing of the individual; individual variation is the main consideration.

b. ADAPTATION—every individual adapts himself to conditions of life.

c. PURPOSIVENESS (Baer's "Zweckmässigkeit"): all evolution shows a tendency toward perfection. (Of course, we don't know as yet, what to say about a will toward perfection). All these principles are based on comparative and experimental study of animals and plants, but not on a study of children.

The processes may be put in the following familiar schematic form.

These five or six principles are based primarily on study of animal life and biological philosophy.

- a. Use and misuse of certain organs. (Lamarckism).
- b. Heredity (Lamarck — Weissmann and Galton).
- c. Survival of the fittest. } Darwinism.
- d. Natural selection. } Darwinism.
- e. Struggle for life. } Darwinism.
- f. Mutual aid ("consciousness" being a new factor in evolution): Kropotkin.

Spencer seems to be almost alone in this movement. Those who follow developmental pedagogy are more exact, specific and clear in their conception of education than Herbert Spencer. I have in mind here the great American educators: President G. Stanley Hall, James Mark Baldwin, A. F. Chamberlain, C. H. Judd, and many of their followers. Baldwin is a follower of Spencer, while Hall and others proclaim the theories of Haeckel,— theories of recapitulation. Of course, the recapitulation theory as applied to education is — as they say — still in its infancy. I do not mean here the extravagant theories based on the misuse of the biogenetic law (psychogenetic law of Ziller and the Herbartians fancifully appled to "historical" instruction). A child recapitulates its philogeny. Yes, but how much does it recapitulate? The child makes some short cuts in his recapitulation? Yes, but how many of them does it make? Much will come without teaching. Yes, but just how much? Something will be done by instruction and elucidation. Again, how much? Will a child begin to walk sooner because he first crawls? Will he make greater progress if he starts his schooling at three instead of at five years of age?[1] All these questions must be answered, not by mere guessing, but by painstaking, scientific pedagogical investigations. President G. Stanley Hall has taught how to labor and to wait. Just now the scientific data regarding these questions are very meager. Many theories have to be tested. And much experimental work has to be verified in the field of education. Many pedagogical experiments have been performed, but their verification is still forthcoming. Thus the questionnaire methods of Galton and DeCandolle in regard to heredity are too crude to be accepted by modern scientific pedagogical eugenics. Thorndike is right when he says that in pedagogy a good deal is said, but nothing is proved. We expect much from Stern's psychography, Meumann's experimental school pedagogy, and Hall's comparative study of children. So far these are the only three hopes for modern pedagogy. The first laboratory to study human beings was founded in Russia (1908). A child by the name of Seryoga Parinkin is the first subject of study in this institution under the direction of Bechterew.

---

[1] Winch: A modern basis for educational theories (Mind, Vol. 18, 1909).

The historical and scientific conceptions of education, if taken separately, prove to be one-sided. It cannot be denied, however, that each movement has contributed something to the general uplifting of pedagogy. Perhaps we would sooner reach our goal if we should attempt some compromise between the various movements. Let us try!

IV

To get a complete idea of the nature of education, we have to take into account, at least the following four considerations:

I. Evolutionary Consideration of Education

1. Individual variation and adaptation to natural conditions of life are the basis and the most general assumption of all education. "Education is variation." An educator must know that education is not planned variation. Variation begins with nature, but education tends toward equalization, or the suppression of variation.

"Education is adaptation." We try to adapt the growing generation to present conditions. Education should not be adaptation to present conditions only. We should not only strive for adaptation to present conditions, but to so fit the child that he will consciously strive to better present conditions. We are not only growing beings, but we are growing beings who consciously strive for the attainment of certain ideals.

In short: *considering the natural development, and deducing therefrom all the evolutionary facts, we may adopt a natural basis for education.*

2. If we compare the processes of conscious education with natural development, we see at once, that education is something more than development or perfection. In all forms of organic life there is evidence of a strife for development and perfection. But this strife is not guided below man by any consciousness of the end to be attained. Only in man is this conscious and voluntary strife for the realization of an ideal of perfection manifested. Education is, therefore, an organized effort in natural development to induce the child to strive after an ideal of perfection. In short: *education, unlike natural development, is a conscious effort toward the realization of human educational ideals.*

3. In addition to this last partial definition of education, we must add the element of compulsion. To realize the conscious educational ideal natural development alone is not enough. In the training of domestic animals, and in the training of athletes, we notice the forcing of the natural powers beyond their natural development. So in the realization of the educational ideal, man must strain his powers beyond their merely natural evolution. In short: *in contrast to the natural course, education has a strong element of compulsion, a force toward a higher plane of development.*

4. But this is not sufficient. Education must transform this outer compelling force to an inner impelling desire for the attainment of the educational ideal. This is the only guarantee that the individual will continue his education after his period of schooling is over. In short, then: *in contrast to mere natural development, education is the conscious and persistent and impelling effort toward the realization of the human ideal.*

Next to the evolutionary consideration of education is the:

II. Sociological Consideration of Education

1. Education is transmission or tradition. Every generation takes an interest in its cultural wealth, customs, manners, social ideals, political and religious beliefs, and virtues. This is shown by the transmission of traditions from one generation to the other. It may be called the "occult coadjutors."

2. Education is the introduction of the individual into society. More particularly, education is the introduction of the individual to the moral atmosphere of the community; the adaptation of the individual will to the will of society; the training of all impulses and will directions according to the standards of the social or communal life — especially the development of sympathy, altruistic activities, and a sense of common interests, etc., familiarity with the prevailing habits and customs; familiarity with and performance of the duties of family, state, nation and finally philanthropic duties. To summarize: *Considering the different classes of human society, education is partly the building up of the moral sense, and partly the acquiring of the traditions and cultural wealth of former generations.*

Besides the evolutionary and sociological considerations of education we must now consider:

III. Individual-Psychological Consideration of Education

According to this conception or consideration, education is the cultivation and development of the individuality of the child and perfecting his mental abilities and dispositions according to the periodicity and peculiarity of his being. We must never forget the fact that each individual is *sui generis* in periodicity. Education must consider the child, not as an adult, but from the point of view of child psychology and experimental pedagogy.

In education, we have to deal with the child's intellectual, volitional and emotional abilities. These abilities are essentially developed by exercise and habituation. Our present methods of education are characterized by a certain unintentional harshness. This is because our school system (based on all but pedagogical principles) is not in a position to form a clear and precise idea of the state of the pupil's mind, of his wants, of his thoughts and feelings and of his *abilities*.

Intellectual education includes the acquisition of knowledge and skill. From the individual-psychological point of view, education consists of the practicing and habituation of volitional action and mental abilities, cultivation of emotional reactions, and communication of knowledge and skill. The success of this kind of work will depend upon our ability to enter into the pupil's innermost heart, and to look at things through his eyes. In other words: *from the individual-psychological point of view, education is partly communication of knowledge and skill, and partly cultivation of the mental abilities* — intellectual, emotional and volitional.

But education cannot be regarded merely as a training of the mind and of the moral nature. It must stand for the development of power and function in the organism as a whole. We must, therefore consider, lastly:

IV. Physiological-Hygienic Consideration of Education

Under this heading we include:

1. The development of all physical powers upon which depends the development of mental abilities, especially the development of the senses and motor abilities.
2. The care of bodily powers and health, including everything under the term "Dietetics" ("School Hygiene").

In short: *from the physiological-hygienic point of view, education consists in teaching the child the proper use and care of his body.*

"Nothing new under the sun!" . . But nevertheless, the sun is placed in a new position in the heavens from which it casts at least a ray of light from a new angle on this large subject.

Bibliography

1. Baldwin, J. M. Mental Development in the Child and the Race, N. Y., 1895. 496 p.

2. Bergmann, P. Soziale Pädagogik auf erfahrungswissenschaftlicher Grundlage und mit Hilfe der induktiven Methode als univeralistische oder Kultur-Pädagogik. Gera, 1900.

3. Binet, A. Les ideés moderne sur l'enfants. Paris, 1909. 346 p.

4. Bryan, E. B. Nascent Stages and Their Pedagogical Significance. *Ped. Sem.*, 1900. VII, pp. 357-396.

5. Burnham, W. H. Education from the Genetic Point of View. Proceed. N. E. Asso., 1905. pp. 727-734.

6. Chamberlain, A. F. The Child: a Study in the Evolution of Man. London, 1900. 498 p.

7. Claparède, E. Psychologie de l'enfant et pédagogie expérimentale. Geneve, 2nd, ed., 1909. 282 p.

8. Compayré, G. L'adolescence. Paris, 1909. 195 p.

9. Ellis, A. C. Suggestions for a philosophy of education. *Ped. Sem.*, V, 1895. pp. 159-201.

10. Ferriere, A. La loi biogenetique et l'education. Arch. de Psych. IX, 1910. pp. 128-176.

11. Guillet, C. Recapitulation and Education. *Ped. Sem.*, III, 1894. pp. 9-29.

12. Hall, G. S. Adolescence. N. Y., 1904. What is pedagogy? *Ped. Sem.*, XII, 1905, pp. 375-383. Pedagogy — its true value in education. *Ibid.*, XV, 1908. pp. 197-206.

13. Hirt, G. Die Volksschule im Dienste der künstlerischen Erziehung des deutschen Volkes. Leipzig, 1897.

14. Judd, C. H. Genetic Psychology for Teachers. N. Y., 1903. 329 p. Evolution and Consciousness. *Psych. Rev.*, 1909.

15. Kropotkin, P. Mutual Aid: a Factor of Evolution. N. Y., 1904. 348 p.

16. Lange, R. Die künstlerische Erziehung der deutschen Jugend. Darmstadt, 1893.

—— ——. Das Wesen der künstlerischen Erziehung, Ravenburg, 1902.

17. Lay, W. A. Experimentelle Didaktik. Leipzig, 1908,; 2nd ed. 1909.

—— ——. Experimentelle Pädagogik. Leipzig, 1908. 125 p.

18. Lichtwark, A. Wege und Ziele des Dilettantismus. München, 1894.

19. Linde. Kunst und Erziehung. Leipzig, 1901; Der Gefühlsintellekt und seine Bedeutung für die Erziehung. *Zeit. f. pädag. Psych.*, XI, 1910. Heft. 11-12.

20. Mann, W. Lecciones de Introduccion a la Pedagogia experimental. Santiago de Chile, 1906.

21. Messmer, O. Allgemeine Pädagogik. Leipzig, Klinkhardt, 1909; Lehrbuch der Psychologie für werdende und fertige Lehrer. Leipzig, 1909.

22. Meumann, E. Vorlesungen zur Einführung in die Experimentelle Pädagogik und ihre Psychologischen Grundlagen. Leipzig, 1907.

22 a. —— ——. Intelligenz und Wille. Leipzig, Quelle and Meyer, 1908.

23. Munsterberg, H. Psychology and the Teacher. N. Y., 1909. 330 p.

24. Natorp, P. Sozialpädagogik. Theorie der Willenserziehung auf der Grundlage der Gemeinschaft. Stuttgart, 1899. 352 p.

24 a. —— ——. Pestalozzi's Ideen über Arbeitsbildung und soziale Frage. Heilbron, 1894.

25. Netschajeff, A. The experimental psychology of to-day in its relation to school instruction. St. Petersburg, 2nd ed., 1909. (Russian).

25 a. —— ——. ———& Lazursky, A. F., Editors, Mental Life of children. St. Petersburg, 910.1 (Russian). pp. 282.

26. Partridge, G. E. An Outline of Individual Study. N. Y., 1910. 240 p.

27. Rumyanzeff, N. E. Pedology. St. Petersburg, 1909. 81 p. (Russian.)

28. Scherer, H. Die Pädagogik in ihrer Entwicklung in Zusammenhange mit dem Kultur-und Geistesleben. Leipzig, 1897. 2 v. in 4.

29. Scott. Social Education. Boston, 1908.

30. Schubert, C. Bildende Kunst in der Erziehungsschule. London, 1906.

31. Schulze, R. Aus der Werkstatt der experimentellen Psychologie und Pädagogik. Leipzig, 1909.

32. Seemann, A. Bildende Kunst in der Schule. Leipzig, 1902.

33. Spencer, H. Education. N. Y., 1898. Works, 1897-1899. 418 p.

34. Stern, W. I. Über Psychologie der individuellen Differenzen (Ideen zu einer "Differentiellen Psychologie"). Leipzig, 1900.
—— ——, Baade & Lipmann. Kommission für Psychographie. Zeit. f. Angew. Psych., III, 1900. pp. 163-215.

35. Sully. Psychology for Teachers. Last ed., 1910.

36. Swift, E. J. Mind in the Making. N. Y., 1908. 329 p.

37. Thorndike, E. L. Educational Psychology. N. Y., 1910 (2nd ed.). 177 p.

38. Tyler, J. M. Growth and Education. N. Y., 1907. 294 p.

39. Whipple, G. M. Manual of Mental and Physical Tests. N. Y., 1910. 534 p.

40. Willman. Didaktik als Bildungslehre nach ihren Beziehungen zur Socialforschung und zur Geschichte der Bildung. 3rd edit., 1903, 2 vols.

41. Winch. A Modern Basis for Educational Theory. ("Mind." XVIII, 1909.)

42. Wundt. Über reine und angewandte Psychologie. "Psych. Studien," V, 1909. pp. 1-47.

A BASIC EDUCATIONAL DELUSION

By **Harry Lyman Koopman**, Librarian, Brown University

The sage Artemus Ward tells us gravely how he made large money by exhibiting the solar eclipse of 1860 through an open-topped tent. Had he been indulging in a covert prophetic satire on the mental attitude of present-day educators, he could hardly have hit upon a more apposite illustration. In the eyes of our schoolmasters the vast, overarching sky of knowledge can be seen only from within the walls of their open-topped tent. The world is willing to admit that they may have conveniences not ready to hand outside—smoked glass through which to observe the eclipse, and telescopes for viewing stars and planets and comets. But the world is still stubbornly skeptical whether these appliances are or may be furnished only within those narrow bounds; and it even ventures to question whether he whom fate has excluded from the sacred enclosure may not as he runs read much of what is most worth knowing in the heavens above him. Or, dropping the figure, it persists in asking the question: Are our educators justified in the tacit assumption that people cannot know anything of the world of literature, art, and science unless they have learned it in youth within the walls of a school?

Such a question virtually answers itself; yet the emphatic negative which it raises in the reader's mind is belied in every school curriculum and openly defied in the burden of miscellaneous studies that is piled upon the back of every school child. The framers of our curricula appear never to have asked themselves the two fundamental questions: What must the school give if the world is to have it at all? What can the school further give with advantage to society? The answer to the first question, if that is put absolutely, is: Nothing. If it is put relatively: A certain few things. The answer to the second question is: Much, but not necessarily much for each child and by no means the same things for all children. In other words, if our schools were all to be closed, more people than now would remain in ignorance, but most people would find themselves at middle life knowing as much as they do now. For it must be borne in mind that the school is but a small part—not the initial part and not the final part—of any man's education.

What is it then that the school really does? Its first and most important function, from the kindergarten to the university, is to stand *in loco domi*, to offer a place where we can bestow our children until they are ready to launch out into life for themselves. Character-moulding, nurture, is therefore the first and most important function of the school. Its second function is to see that the child does not fail to acquire certain intellectual rudiments which are necessary stepping-stones to further knowledge; and these are substantially only the three familiar subjects of reading, writing, and arithmetic. These indeed may be and often are learned out of school; and as for other subjects, there is no individual one in regard to which formal education is indispensable. Geography is usually learned in school; but the school is after all a rather poor place in which to learn it. One certainly does not need to go to school to learn history. Indeed, it is probable that those among us who know history vitally owe their attainment to other sources than the school. The same is true of science and language. School is a distinctly poor place in which to learn foreign languages and even the use of one's own language, or to gain an appreciation of literature. The methods natural, or perhaps available, in school seem indeed particularly futile when applied to language and literature. These are sweeping statements; but do those people of middle age who are eminent for mastery in any of these fields owe their attainments to the schools or to other influences, if not most of all to native capacity and tastes?

If these postulates and their implications are admitted, what happens to the school? For one thing, an immense burden of responsibility is rolled off its shoulders. The school need no longer charge itself, at least directly, with the entire intellectual furnishing of the adult. It need no longer say to itself: If the men and women of the future are ever to know short-hand or botany or oriental history or algebra, it must be through me. It can with an easier conscience apply itself to its parental task of moral training, it can see that the pupil is furnished with the groundwork, the tools, of future study, and it can make other subjects the means of opening up to the developing mind the vision of the universe of knowledge that surrounds it. It will add to the vision the enthusiam for learning which belongs to it, but which the school of to-day, even when it allows a glimpse of the vision, so often omits or actually destroys.

The truth is, children begin to learn before they go to school and men and women keep on learning after they have left it.

They cannot help learning. The school can do much to determine what the adult shall learn, and here is its opportunity. It can implant in the pupil a hunger and thirst after knowledge that he never can sate. It can do a hundred things well for various pupils where it now does twenty-five badly for all. In modern life school is a necessity, but not first of all an intellectual necessity. Yet, having the pupil in its control, it is clearly under an obligation to see that he acquires certain fundamental elements of information. These elements will be the same for all, at least for all of the same sex. After this the school and the pupils have room for choice, and the choice will not always be determined by what is easiest or most agreeable; it may often be made on disciplinary grounds. But it can be made individual, and it can be absolutely free from the pressure which is born of the present mistaken sense of responsibility for the pupil's entire intellectual outfit. That sense of responsibility harks back to a time when there was a rational justification for it, when schools were fountain-heads of knowledge as well as of training, but that was before Gutenberg's day, and they seem to overlook the fact that we are now living in the fifth century of printing. The world surrounds the pupil not only with the knowledge that comes from direct observation and experience, but also with the vaster knowledge, recorded, systematized, and interpreted, which is stored in our libraries and thrust upon him in magazines and newspapers. Let the schools teach first, last, and midst the mastery of these sources of knowledge, and their own part in the training of humanity will become vastly more efficient, and if not correspondingly easier, at least vastly less burdensome both to themselves and to the children whom we entrust to them.

KNOWING AND EXPRESSING[1]

By R. M. Ogden, Ph. D., University of Tennessee

There is a belief, which I fancy to be rather wide spread among teachers, that a pupil knows only what he is able to express. After putting a question to a pupil, a not infrequent response is: 'I know it, but I can't just tell it.' It is evidently difficult to place an estimate on the knowledge which such a pupil may believe he possesses, and the common practice would probably be to accord that pupil a zero on his recitation.

But there is something more than this bit of practice which I have in mind. The problem must arise: does the pupil possess the knowledge which he believes he does, or is it correct to assume that if he really had the knowledge, he would also have the capacity to express it? In the former case, the pupil's deficiency is clearly in his capacity of expression, in the latter, it is the content of knowledge that is lacking.

Now this is not a mere academic question, as it might seem to be at first view, in the light of the general assumption that knowledge which a person may possess but cannot express, is clearly useless. The answer to the question involves, rather, the whole trend of the educative process as applied to that pupil. For it is clear that a teacher may instruct with a minimum of emphasis upon the pupil's expression, as is the case in the lecture method, or whenever the teacher does the greater part of the talking in class. On the other hand, he may instruct with a method which stresses the responses of his pupils, be they oral, .written or manually constructed.

There exists at the present time, if I am not mistaken, a somewhat widely spread pedagogical doctrine that knowing *is* expressing; that there is no definite bifurcation of the two processes. And modern psychology, at least in so far as the general trend of American psychology is concerned, has lent its assent to this doctrine. The conclusion is arrived at in a most direct fashion, and at first sight it is quite convincing.

---

[1] Read before the Joint Session of the Child Study Department, Southern Educational Association, and the Southern Society for Philosophy and Psychology, at Chattanooga, Tenn., Dec. 27th, 1910.

It has long been the contention of the 'structuralist,' or analytical psychologist, that consciousness is made up of three sorts of elements, and only three: sensations, images, and feelings. All that we may perceive, and all that we may think, when subjected to careful analysis breaks down into elements of these three sorts. The 'functionalist' in his turn has risen to do justice to the active side of conscious life, and, as a result of genetic and physiological considerations, has reached the no less definite conclusion that all states of consciousness issue directly or indirectly in bodily adjustments.

Since, then, our knowledge of a thing consists in sensations, images, and feelings of it, and these all issue in corresponding movements, is it not logical to assume that the movements of adjustment which result should be adequate to their conscious motives, *i. e.*, to the sensations, images, and feelings which have preceded? Indeed, the 'functionalist' regards the relation of conscious motive and attendant reaction as unified to such a degree that he goes even further, and declares that the act of thought is incomplete as a matter of consciousness alone, and attains its completeness only with the attendant reaction.

Now I find no particular flaws in these conclusions, provided the premises are acceptable. But especially with respect to the 'structuralist's' contention, I must take issue.

Recent experimentation, mainly in Germany, in some of which I was privileged to take part, coupled with a considerable amount of similar investigation which I have since been directing in my own laboratory, has forced me to the conclusion that the 'structuralist' is wrong in his contention that sensation, image, and feeling are a sufficient number of categories under which to collect and distribute the complex facts of experience. I maintain, as has been maintained by Külpe, Bühler, Bovet, Binet, Woodworth and others, that there is an imageless mental content which possesses the characteristics of *knowing*, rather than those of feeling; which is concrete and definite as to content, and yet bears no striking resemblance to the sensations which are generally agreed to be the source of our experience.

If a person thinks only in images: pictures, sounds, words and muscular factors, one can see no reason why he should not be able to express with some degree of accuracy those images of which he is conscious when the thought forms in his mind, and one may contend with a fair degree of consistency that an adequate expression is a necessary consequence of such imaging. But if one denounce this all-pervading presence of the image as primarily false, and even were it true, as insufficient to describe the actual state of mind when one thinks; and if one declare for a class of mental factors which are neither colored, nor sounding, nor motory in content, but may, perhaps, be expressed indifferently in these or those words, in this or that picture, then it is no longer so evident that an adequate expression is invariably coupled with our conscious thought.

It is impossible within the brief limits of this paper to give any detailed review of the experimental results obtained by myself and by others in substantiation of these imageless contents. I propose, however, to describe and analyze one experiment taken more or less at random from many of a similar nature which I have performed, in order that I may make somewhat more clear the need for positing this imageless thought content.

The experiment in question consisted in instructing the subject to obtain the meaning of a word, and then to react with a pre-determined oral expression, an explosive sound against a 'speech key' which was electrically connected with a chronoscope and thus registered the termination of the experiment. The word in this case was 'lily' and was printed on a card which was exposed to the subject by an apparatus especially contrived for such purposes. The subject reacted in approximately 1.3″, and his introspection was as follows:

'I noted the spelling at the first glance. The meaning, that of a flower, came immediately, There was also a notion that there should be two ls, which caused me to glance at the word again, when I saw that there was but one. I became conscious then that *lily* was a girl's name, then, after a little time, that the girl's name was spelled with two ls. The word seemed to give a peculiar impression as rather delicate and pretty.

'There were no images present.'

This is a fairly typical experience from among the many which I have obtained in working for more than a year with some ten different persons. First comes the meaning which simply flashes forth without verbal, visual or other imagery. Second, there is the thought that there should be two ls, causing the subject to look again at the word and check the spelling. But this thought does not bear its full meaning, there occurs a third thought that *lily* is a girl's name, and then, finally, 'after a little time' the meaning is completed by the thought that the girl's name is spelled with two ls.

For the purpose of testing the actual content of this experience, let us consider certain possibilities of interpretation which are made much of by those who oppose the existence of imageless thought:

I. The part played by *kinesthesis*, or motor factors in thought.

II. The possibilities of condensed imagery of various types.

III. The theory that thought is essentially unconscious.

IV. The part played by imageless relational factors.

I. Many contend that thought is carried on to a large degree by motor sensations and images which, though very fundamental to our conscious lives, are rather elusive when introspection is focussed upon them. The question here is, may we consider certain movements, tendencies to movement or images of movement on the part of eyes, throat, tongue, lips, hands or body as being adequate to the thoughts which our experiment has registered. In the first place, what conceivable movement could be adequate as a vehicle for the general meaning of flower? Second, note that the 'notion that there should be two ls' is *followed* by a glance back at the word to see if there are two. But suppose that the introspection here is fallacious; that the real occurrence was something like this: some peculiarity in the perception of the word occasioned an uncertainty in the motor adjustment, whereupon there followed an automatic return to the word for a second perception. The 'notion that there should be two ls' then becomes an afterthought. But is it, I ask, any less a thought which is essentially independent of motor factors?

Such a description, however, does real violence to the facts as recorded. The subject *knows* why he is returning to the word. He *knows* that he is back to find out if there are two ls or one. No motor adjustments or tendencies that I can conceive are adequate to stand as vehicles for this knowledge.

The thought that 'lily' may be a girl's name is an entirely unique factor, a new meaning, and irreducible to any motor adjustment save, possibly, such as would be involved in articulating the words 'girl's name.' That any such imagery was present is denied by the subject. As to the reliability of his assertion, I can simply say that I have been working with him for considerably more than a year, in which time I have performed hundreds of experiments of this nature with him. Not only do I regard his introspections as unusually unprejudiced and accurate, but, which is far more important in such matters, the internal evidence gained by a comparative study of many such reports indicates the distinctive character of verbal imagery when it does appear, and therefore the reliability of the practiced observer in indicating whether such factors are, or are not present.

The last thought which connects together in an associative synthesis the 'notion of the two ls' and the girl's name is equally remote from any motor vehicle. It indicates, too, a fact for which there is much evidence, but of which I can here take but a passing notice, namely, that the associative meanings are processes which work themselves out, sometimes rather slowly, and while in this process of development, their outcome may be quite unknown to us.

Kinesthesis, then, or the presence of motor factors, would hardly seem to be an adequate bearer for the thoughts here recorded.

II. We have next the contention that thought consists in condensations of imagery, which, as a result of practice, may have become so rudimentary as to be practically inscrutable. There is no doubt, I think, that imagery does with time undergo this process of disintegration and collapse. But how, I ask, can any set of images, complete or rudimentary, be conceived as adequate to the particular process of thought indicated in our experiment? It is conceivable, of course, that 'lily' should be responsible for the immediate associative reproduction of 'lilly,' and the latter image, in turn, associate some sort of verbal or visual image for *girl*, together with the motivation for a renewed glance at the original word. But this order of events is not the one recorded, nor is it the one which is characteristic of the mass of experiments which I have performed. A 'notion' brings about the checking of the spelling, and only later does the notion become explicit, first, by the thought of a girl's name, and second, as if in substantiation of this thought, by the added thought that a girl's name is spelled with a double l.

Did I not have the data for many similar experiences to support my interpretation, I might suppose that my subject mistook the order of his thoughts. But it is one of the most striking features of thought analysis, that the order of the partial thoughts is *not* that which one would have to posit in assuming that thought consists in the direct association of images. The integration of images, however rudimentary the images may be, is of a different kind from the process of thought here indicated. Instead of being the essential factors of thought, images would seem rather to be analogous to a trail of sparks which are cast off and follow in the wake of thought. Condensation of the images can, therefore, hardly be considered a satisfactory explanation for an experience which would not be explained by the same succession of images if they were complete.

III. A third contention has it that the process of thought is essentially unconscious, being based on habits of neural action which work themselves out automatically, bringing to consciousness only as a final result the integrated image or expression which carries the meaning of what has been going on. I am quite agreed that such unconscious workings do exist, but the resultant consciousness of meaning is not invariably an image or the sensational complex produced by a motor expression. No images at all which could be adequate to the thoughts present in our experiment were noted, and the only motor adjustment was that involved in the renewed glance at the word to check its spelling. The only way, then, in which this contention could be here justified would be in the supposition that the subject did not know what he was experiencing until after his reaction, until, in fact, he had put it into the words of his introspective report. There is, perhaps, no better way of combatting such a view than by reference to one's own personal experience in such cases. The reports of my subjects, as well as those of myself in the many experiments in which I have served as observer, leave me with the complete conviction that the experience is, in fact, definitely ended with the reaction, and that the introspection is, indeed, a separate and distinct experience.

IV. Finally, there is the opinion of those who are willing to go so far beyond the accepted categories of sensation, image and feeling as may be necessary to introduce the consciousness of relation as an imageless reality. They have in mind an imageless consciousness of a process which operates to bring the images together into a synthesis. This is also a fact which need not be denied. But it does not reach far enough to give an adequate explanation of such an experience as is here described. A relation must involve at least two factors which are being related. In our experiment the necessary factors, such as the word and the flower, the spelling with one l and with two ls, the word with the girl's name and the girl's name with the two l spelling, were certainly not present as images, if we are to believe our reporter, though they must have been present as thoughts. We may therefore conclude, I think, that however important these imageless relational factors may be for thought, they by no means furnish us with the complete explanation which some writers claim for them.

Take the results of such an experiment as this in any way one will, and however one may choose to interpret them, the assumption of imageless contents as a fourth category of mental states appears to me to be absolutely necessary if one would do full justice to the process of thought. To avoid this issue means, I believe, to remain in ignorance of the real subtleties of the thinking mind.

I have said enough, however, to indicate the problems involved in these investigations, and the conclusions which are to be drawn from them. I therefore return to my thesis that knowing is not identical with expressing, if by expressing we mean a relatively adequate interpretation of that which is known. Knowing is rather a process which is distinct from the process of expression, and expression, in its turn, has its own peculiarities of origin and growth. Indeed there are many who possess a facility of expression quite beyond the demands of their feeble knowledge, while others, though deep and effective thinkers, are condemned to struggle constantly with their deficiencies in expressive art.

In conclusion, let me say that I am not advocating the employment of measures any less strict in enforcing accurate and adequate expression on the part of our pupils. Quite the contrary, for my own experience as a teacher has led me to conclude that the greatest general need which my pupils show is their inability to express themselves clearly. But this very thing has led me on to the thought that possibly a reason for this general inability to make themselves clear is found in the fact that their training has been largely of the content-memory type, a type in which the expression has been left to take care of itself. What we need is much greater stress upon the expression side of education, and more latitude for the individuality of our pupils. A broader training in linguistic expression, oral and written, would, I believe, help greatly to relieve the very evident congestion of thought and words apparent whenever one strikes the average pupil on a point outside the range of his text-book discussion.

The doctrine that thinking is expressing, in so far as it culminates in the belief that a person can only express adequately what he has definitely imaged or committed to memory, is, in my opinion, a really pernicious doctrine. We should, as teachers, be constantly on guard against the repetition either of our own words, or of the words of the text-book. However true it may be as a literary ideal, we must overcome the notion that only one expression is supremely adequate to a thought, in order that we may give a more considerate attention to those who know but cannot express.

ARITHMETIC AND SCHOOL HYGIENE

By **Wm. H. Burnham, Ph. D.**, Clark University

Modern school hygiene is far-reaching in its demands. It maintains that not only the content of education, but all the processes of learning and of instruction should be considered in relation to the health of the pupils. It challenges every subject of instruction and every principle and method in education. Arithmetic with its high and honorable place in the curriculum is no exception.

First of all hygiene joins with pedagogy in asking why so much time is devoted to this subject in the traditional curriculum and what are the results of the instruction.

An extensive study of the results of arithmetical instruction in our schools was made some years ago by Mr. Rice (24). Recently the same subject has been investigated with improved methods by Mr. Stone (27). The result of both investigations is to indicate that the pedagogical outcome of the instruction is not a function of the time devoted to the subject. The investigators often found as good results in those schools where a relatively small amount of time was spent in arithmetic as in those where the largest proportion of time was allotted to it. Mr. Stone found his best results in a school where only 14% of the time was devoted to the subject, although it is true he found his poorest result in a school where 12% of the time was devoted to it; but in other schools where from 16 to 20% of the time was spent in arithmetic the results were not as good as in some of those where less time was spent.

If in 16% of the school time pupils learn as much arithmetic as in 20% of the time, hygiene suggests that the superfluous time devoted to the subject had better be spent in play out of doors. It is not for hygiene to minimize the importance of arithmetic; but with so many subjects crowding the curriculum the question whether too much time is not spent on it, although primarily a pedagogical question, becomes an hygienic one also.

Before considering the results of the work in arithmetic, let us glance for a moment at the history of the subject, and the reasons that have given it such a large place in the common school curriculum.

First of all we find that a certain superstition has been connected with it in the history of thought. In the early times number and number relations seem to have had often a mystic and even sacred significance. Pythagoras found the key of the universe in number and proportion. For many since Pythagoras number has had a philosophical significance and consequently a great fascination. In the Middle Ages a religious significance was attached to arithmetic. For a single illustration, in one of the old books the following dialogue occurs:

"What does the number 7 remind you of?"

"The 7 deadly sins, the 7 sacraments, and the 7 golden candle-sticks."

"What have you to tell me about the number 12?"

"The number of the apostles, the number of the minor prophets, and of the gates of the Apocalyptic Jerusalem." (10, p. 280.)

A religious lesson, however remote, could always be correlated with that in arithmetic. Suevus tells the story of Jonah to introduce problems in regard to the freight of merchant-vessels and the like. Another of the older mathematicians connects a problem in statistics with the story of David's sin in numbering the Israelites. A certain William Butler (31), who prepared, about the close of the 18th century, "Arithmetical Questions. . . . Designed for the use of Young Ladies," showed his ingenuity in correlating things sacred and profane by a problem like this: "To as many guineas as the Israelites wandered years in the desert add as many half-crowns as there are provinces in Spain."

An example of the not over modest claims made by some educators for the study of arithmetic is furnished by William Kempe (15) in the dedication to his translation of The Art of Arithmeticke by Ramus. "In his dedication Kempe asks who is there that can attain to a knowledge of his art, whatever it is, without arithmetic. It is useful in divinity, in civil polity, and 'in the seat of judgment the golden rule of proportion is the law of equity.' In physics, in astronomy it is clearly necessary."

"What is music," he goes on, "in sounds, in harmony and in their spaces, concords, and diverse sorts, but only arithmetic in hearing? Take away arithmetic, ye take away the merchant's eye, whereby he seeth his direction in buying and selling; ye take away the goldsmith's discretion, whereby he mixeth his metals in due quantities; ye take away the captain's dexteritie, whereby he embattaileth his army into convenient order; finally ye take from all sorts of men, the faculty of executing their functions aright. Arithmetic then teacheth unto us matters in divinity, judgeth civil causes uprightly, cureth diseases, searcheth out the nature of things created, singeth sweetly, buyeth, selleth, maketh accompts, weigheth metals and worketh them, skirmisheth with the enemy, goeth on warfare, and setteth her hand almost to every good work, so profitable is she to mankind."

Jänicke (14) suggests also, that the reason for the undue attention to arithmetic in the old schools was the laziness of the teachers. It was comparatively easy to fill up the time of instruction by giving the pupils long and difficult sums.

It is true that with the later development of the classics arithmetic lost its prestige and had an inferior place in school work. But with the development of modern commerce and industry the value of arithmetic has loomed large again and the view has been wide spread in this country that this practical importance of the subject makes it necessary that a large amount of time should be allotted to it in the curriculum.

Another reason for the great amount of time and energy devoted to instruction in arithmetic has been the idea that mathematics is especially valuable for formal training. According to many educators no other subject can give such excellent mental discipline.

These are among the reasons why a great deal of useless matter has been introduced into the text-books; and that it has come to pass that, in the opinion of many, the sooner children can be taught this subject the better. Sometimes, however, even in the older days a voice was raised in protest.

"That mathematics," says Sir William Hamilton (11), "can possibly in their study educate to any active exercise of the powers of observation, either as reflected upon ourselves or as directed on the affairs of life, and the phenomena of nature, will not, we presume, be maintained." "That they do not cultivate the capacity of generalization," he continues, "is equally apparent." "But the study of mathematical demonstration is mainly recommended as a practice of reasoning in general, and it is precisely as such a practice that its inutility is perhaps the greatest." Mathematical demonstration calls forth a minimum of thought. "Are mathematics then," he concludes, "of no value as an instrument of mental culture? . . . To this we answer, that their study, if pursued in moderation, and efficiently counteracted, may be beneficial in the correction of a certain vice, and in the formation of its corresponding virtue. The vice is the habit of mental distraction; the virtue, the habit of continuous attention. This is the single benefit to which the study of mathematics can justly pretend, in the cultivation of the mind; and it is the only one accorded to it by the most intelligent philosophers."

In this country perhaps something of the old superstition has survived, and also the tremendous importance of arithmetic for success in this life has been emphasized. In the older schools in the rural districts the boys often spent most of their time in ciphering. The feeling of the rural communities in regard to arithmetic is hardly put too strongly by Eugene Wood in one of his essays in "Back Home."

"Reading, writing, and arithmetic,—these three; and the greatest of these is arithmetic. Over against it stands grammar, which may be said to be derived from reading and writing. Show me a man that, as a boy at school, excelled in arithmetic and I will show you a useful citizen, a boss in his own business, a leader of men; show me the boy that preferred grammar, that read expressively, that wrote a beautiful hand, and I will show you a dreamer and a sentimentalist—a man that works for other people. While I have breath in me, I will maintain the supereminence of arithmetic. There is no room for disputation in arithmetic, no exceptions to the rule. Twice two is four, and that's all there is about it; but whether there be pronunciations, they shall cease; whether there be rules of grammar, they shall vanish away. . . . Arithmetic alone is founded on a rock. All else is fleeting, all else is futile, chaotic—a waste of time."

This exaggerated esteem of arithmetic has decreased in recent years; but probably a fifth of the time is still devoted to the subject in most of the grade schools. What has been the result of all this attention given to arithmetic? From a pedagogical point of view the results seem to have been unsatisfactory as indicated by the investigations of Mr. Stone (27) and others. From a hygienic point of view some of the results have been unfortunate.

While some persons have great natural ability in mathematics and are fond of its processes and its puzzles, on the other hand to many children the subject is a peculiarly difficult one. The case of Dean Stanley and other distinguished men who never could make much of mathematics are enough to show that such people are not always dullards. In the case of some children, as pointed out by General Walker (30) and others, work in arithmetic is a general source of worry, interferes with sleep, the pupils doing sums or the like in their dreams, and is liable to be a serious menace to health. If taught prematurely or by a bad method it may cause or aggravate nervous disorder.

Dr. Sturges, of London (28), studied a great many cases of chorea in children. In 1885 he reported upon 200 cases. A cause could be assigned in 75 cases. Of these 14 were, in his opinion, due to causes connected with the school, nearly one sixth of them; and for chorea in general the school is responsible for at least one fourth of the cases. Work in arithmetic he deems a special factor in producing the disorder. He thinks that working sums is very liable in a nervous child to cause chorea. Anything in fact that so bothers a child that the mere mention of it makes the child cry is dangerous. The following case that he cites is instructive.

"The patient was a girl, aged nine, healthy and ruddy but of excitable temperament, is stated by her mother to have been troubled and sleepless owing to school lessons, and especially school sums. . . . As evidence of her capacity the child worked a sum in long division before us sitting up in bed. . . . The method employed was this. The left arm is clutched around the slate, the fingers being hooked to its right upper corner and it is maintained in writing position by being pressed against the pit of the stomach. Face, lips, and tongue concur with the right hand in the work to be done. The slate pencil is held low, and, the tip of the forefinger being always moist, figures in the immediate vicinity of writing operations are in danger of getting accidently rubbed out. At the slightest suggestion of error, the work is suspended, the finger rewetted, and the doubted number rubbed out. From the frequency of such erasures and the mode of effecting them, the working surface of the slate becomes wet and sticky. In the bad places, indeed, owing to repeated correction, there is a confused mixture of saliva and pencil mark which can no more be written upon than a coat of varnish. The seriousness and persistence with which the child encounters all these difficulties, the conscientious completion of each figure and prompt wetting of the finger to score it out, the cheerfulness and alacrity displayed when the time comes for some formal and obvious act, such as drawing lines and affixing crosses, the way in which severity of mental conflict is shown by a tighter grasp upon the slate and increased pressure upon the stomach—all this makes a picture which to the initiated is half comical and half touching."

In the English schools it appears that it has been a common practice for pupils to stand in a line and work sums in concert at a uniform rate. Of his patient Dr. Sturges adds: "Suppose her standing in class, with heels together ciphering. Is there any kind of work that can be thought of so admirably contrived to develop the complaint we are considering?"

The significance of such symptoms may escape the untrained observer; but anything which indicates anxiety and worry, mental strain and nervous tension in connection with a child's school work is serious from the point of view of hygiene; and in the case of a disease like chorea it is specially important that the symptoms indicating it should be recognized so that the disorder may be properly treated while it is in its incipient or school stage. Injury is liable to be done such children not only by the class instruction, especially where drill in concert is given, but also by any harsh or sarcastic words by the teacher. The pathetic tragedies in childhood that occur in individual cases of this sort emphasize the warnings of hygiene more than is possible by means of statistics. A single case is the following:

A boy of ten is working a sum on the blackboard. He stumbles and blunders unaccountably. The teacher in her pedagogical zeal goads and nags him, and finally humiliates the boy by bringing into the class his younger sister from a lower grade to perform the example for him. Within ten days the same boy is ill with endocarditis, a disease to which chorea too often seems to be prodromal.

Hygiene first of all, of course, condemns all such obvious means of injury to health. It is concerned also with the more common but less apparent evils liable to occur. As pointed out by Dr.Baade (1), there are certain secondary effects of instruction, certain by products, to use the language of industry, which are often of great importance. Pedagogy has given special attention to the primary effects of instruction. Hygiene emphasizes the importance of these secondary effects. In arithmetic we have a good opportunity to study these. Perhaps the most obvious are the mental automatisms that result from the premature or undue use of certain methods and devices. Dr. Triplett (29) has studied these by means of the reminiscences of normal school students. Among the cases reported are the following:

One girl who was taught to add and subtract by the aid of an abacus says: "for several years it was impossible for me to get away from those red and green balls, and to this day I scarcely add a column without recalling them unconsciously."

"Another learned the digits by fitting together sliced birds and now always sees them in the old connection. Some write at one side the figure to be carried or make the corresponding number of marks. The "borrow and pay back" method of subtraction often persists through the years. One student in adding counts on to the number the prongs of the 3 or 4. When paying close attention to a subject another finds herself running up the scale of number by twos, threes, or tens. Another writes 1234 continually. Another writes dollar signs by the hundreds. Instead of the different digits some visualize corresponding groups of dots. One says: "I always see the picture of the number on my finger. When recalling a number, as 352 for example, I see the first three fingers then the whole hand and then the first two." Some see the problem being worked out on a mental blackboard. Others note the set of mind given them by years of working for the answer, also the effect of using a rule not understood. Students who learned the multiplication table in concert report being compelled to start at the beginning and go to the combination desired.

The apperceptive bent given the mental reactions by continued drill in a subject is well illustrated in the case of a six-year-old child reported by Triplett, who was being pushed in his number work by a teacher desiring his promotion. "Mamma," he remarked one day, "I am getting so that when I ride or walk in the street I see the combinations in the windows of the houses we pass." Another time seeing the velvet trimmings on a little girl's clothes he exclaimed "Myrtle has combinations of five on her cloak."

The number forms common among children seem often to be the secondary effects of certain devices and methods employed in the early years. Triplett is right, perhaps, in calling many of these pecularities arrests of development.

The most serious form of number arrests, in Dr. Triplett's opinion, is "the counting habit, called arithmomania, when so pronounced as to become pathological. Classification of cases showed forty of these of varying intensity. Later inquiry, however, revealed the fact that several counters are likely to be found in every large class. The trait really seems to be a misfortune, impeding or hindering progress in other directions; numerical relations and quantitative ideas fill the mind to the exclusion of things causal and qualitative." The following cases will serve as illustration:

"From my mathematical training I am under a constant nervous strain in my desire to enumerate everything I see. In our school more attention was given to arithmetic than to any other study. We almost thought in numbers, and ever since then I have had a desire to count telegraph poles, the boards in the sidewalk, and the trees along the way."

"I have a habit of counting by the alternate contraction and relaxation of the muscles of my legs and arms. I often count my steps when I walk and spell words to myself as I alternately contract and relax the muscles as before mentioned. I have counted that row of electric lights on the arch over the front of the stage in the assembly room hundreds of times and also the plaster of paris panels of which each circle of the arch is composed."

"I do not remember of ever knowing anything of combinations. To find out, for instance, what two and three were I always had to count, until I learned it by myself. This arrest has been partly overcome by my high-school work and also by my own teaching, but I often find it creeping into my work especially if I am tired, to confuse and retard me."

Why, it may be asked, are such automatisms injurious? They seem to be innocent and most people have something of the sort in their mental experience. The answer is that they represent at least so much useless material, that the maturing mind has to carry the crutches by which it first learned to walk, or dropping the figure, that they represent unessential mental processes and in many cases prevent orderly, straightforward thinking by causing interference of association or mental confusion. Again in some cases they seem to be the germs of pathological neuroses, and it is noteworthy that these habits persist, and even when they seem to be outgrown the individual is always liable to drop back into them, especially when fatigued or confused. Although partially overcome and repressed they may represent the foci from which in times of mental stress pathological activities are liable to develop.

Again the teacher is apt to desire above all things speed and accuracy in arithmetical work. Hygiene notes the secondary results of the drill in speed and accuracy. These results sometimes seem to be seriously unfortunate. The following concrete illustration is instructive:

"I remember," writes a teacher(4, p. 219), "a primary class that was once brought into a meeting of the teachers of a certain Wisconsin city. The superintendent's purpose was to illustrate the wonderful perfection in 'speed and accuracy' to which the teacher had brought her class. Long examples in addition were dictated to the children, written on the blackboard, and computed. There was one boy who attracted particular attention. He showed the high pitch of strain to which he was raised by not being still a moment—a sort of jig being performed while the process of reckoning was going on He usually came out ahead of the others and excelled in accuracy. I was a high school teacher long enough there to have this boy come into my classes for his higher mathematics. I found him incapable of thinking in those subjects. My subsequent reading of child study investigations leads me to believe that that boy was a striking illustration of arrested development, coming from over stimulation, and over training in one direction."

Hygiene always looks with grave suspicion upon such cases of arrested development. The attitude of sound pedagogy toward such embodiments of speed and accuracy was expressed by Oliver Wendell Holmes (3, p. 454) in his "Autocrat of the Breakfast Table." Commenting on Babbage's calculating machine he wrote: "What a satire, by the way, is that machine on the mere mathematician! A Frankenstein monster, a thing without brains and without heart, too stupid to make a blunder; that turns out results like a corn-sheller, and never grows any wiser or better, though it grind a thousand bushels of them.'' Here is speed and accuracy!

Other obvious secondary effects of instruction in arithmetic have not been especially investigated. We get some suggestion in regard to them, however, in the errors made by pupils. A teacher reports, for example, that a common error in the higher grades is to confuse the square of a number with twice the number The question arises whether perchance the long drill upon the various combinations of two in the elementary work may not have been the original cause of this error. Two times two equals four; two plus two equals four; The square of two is four.

In the simpler study of number and number relations, in addition, subtraction, and the rest, the process of learning is chiefly one of acquiring habitual associations. Hygiene demands that these shall be formed naturally and that interference of association or mental confusion shall be avoided. Some of the processes in case of the Grube method and the like may be challenged from this point of view.

Hygiene is especially concerned with the problem at what age a child should begin the study of arithmetic? Formal systematic instruction is probably begun too early in most schools. Prof. Patrick and others maintain that the subject should not be begun before the age of ten. The experience of many individuals and of teachers in some schools where arithmetic is not studied until this age indicates that such postponement is no loss but rather an advantage. It does no harm for a child to give attention to quantitative relations at an early age; but this should be incidental to other occupations. Formal instruction in the subject is what is liable to be injurious. This is what Prof. Patrick (21a, p. 389) had in mind when he said: "Mathematics in every form is a subject conspicuously ill fitted to the child mind. It deals not with real things, but with abstractions. When referred to concrete objects, it concerns not the objects themselves, but their relations to each other. It involves comparison, analysis, abstraction. It calls for a fuller development of the association tracts and fibres of the cerebral hemispheres. The grotesque "number forms'' which so many children have, and which originate in this period, are evidence of the necessity which the child feels of giving some kind of bodily shape to these abstractions which he is compelled to study."

Much of arithmetic, even of elementary arithmetic, consists of lessons in logical thinking. This is well illustrated in a recent paper by Mr. M. A. Bailey (2) before the National Education Association. Take the following simple problem: "If 1 apple costs 3 cents, how much will 5 apples cost? In terms of logic the solution is as follows:

Maj.: "The cost of 5 apples" is 5 times "the cost of 1 apple."

Min.: "The cost of 1 apple is "3 cents."

Con.: The cost of 5 apples is 5 times "3 cents."[1]

In order to reason correctly it is necessary to consider the major premise, and also to correct this and what logicians sometimes call the guiding principle by constant reference to experience.

Mr. Bailey shows the evil effects of invariably neglecting the major premise and the guiding principle by two illustrations. "The first is a problem involving division in which the relation is indirect:

If 1 man requires 6 days for a piece of work, how many days will 2 men require?

Maj.: 2 men require ½ as many days as 1 man.

Min.: 1 man requires 6 days.

Con.: 2 men require ½ of 6 days.

"If the learner does not keep the major premise in mind, misled by the similarity of the problem to one involving multiplication, he will say: "'Since 1 man requires 6 days, 2 men will require 2 times 6 days.' If he retains the major premise he will reason correctly: 'Since 2 men require ½ as many days as 1 man, 2 men require ½ of 6 days.'" (2, p. 385.)

The second illustration is a problem apparently involving multiplication, but really involving no one of the operations: If a dog standing on 1 leg weigh 15 pounds, how much will he weigh when standing on four legs?

If old enough and mature enough the child will correct the erroneous principle here suggested by reference to experience and make the major premise as follows: a dog standing on four legs weighs the same as when standing on one leg.

---

[1] "The terminology here is open to criticism because this reasoning is not strictly in syllogistic form. What is termed the major premise is rather the guiding principle of this inference. This argument like most of our reasoning, even most of our mathematical reasoning, is not syllogistic. It proceeds, however, as Mr. C. S. Pierce has pointed out, according to certain guiding principles. The passage from the premise to the conclusion takes place according to a habit. 'Upon contemplating the believed premise, by a sort of perception the conclusion is judged to be true.'" The term major premise, however, may perhaps be used as Mr. Bailey does without serious confusion. See "On the Algebra of Logic," page 17. (22.)

This problem is relatively simple. The following, however, is likely to puzzle many children in the lower grades:

If three men fall nine feet how far does one man fall? A child who has had sufficient experience will at once note that each man falls the same distance and hence that here there is no problem. One who does not refer to experience will be likely to fall into the pit, and his error will hardly differ in kind from that of many an older thinker.

Matthew Arnold was perhaps one of those who have acquired the habit of ignoring experience, at least so far as arithmetical questions are concerned. The following story is told of him: "Entering the room of his colleague," he said, " 'You know, Roby, the old way of doing rule-of-three sums is quite exploded: the only way is the unity method.' Roby: 'Always happy to learn. I 'll just set you a sum, and you shall show me the method. If three men can mow a field in four days, how long will it take six men to do it?' Arnold: 'Ah hem, I 'll just take it to my room and come back.' Exit and rapid return. 'I say, Roby, no humbug, you know; it really is a sum?' " (18, p. 432.)

Plenty of illustrations of a more serious sort could be collected. The trouble with all the cranks, partisans, and fanatics is that they have a stock of persisting major premises and guiding principles which no amount of changing experience can alter. Whether or not this is injurious to their own health it is a source of mental disquietude to their companions.

Thus, as we have seen, in order that thinking may be sound it is necessary that one should give attention to the major premise and the guiding principle and also correct and control these by frequent reference to experience. This the child should be trained to do, and it is a serious question whether or not our prevailing methods do not tend sometimes to bring about a habit of artificial thinking according to the forms of logic without reference to experience. This is a habit always dangerous. Experience is the anchor both of wisdom and sanity.

Not only is much of the work in arithmetic really logic, but teachers usually love logic and hence by their methods they are wont to make many processes formal, logical, and complex, which nature has made simple. In the older forms of recitation this was especially true; and not merely waste of time but premature formalism and pedantry were liable to result. A single example must suffice for illustration.

Superintendent Greenwood of Kansas City reported some years ago a typical example of the logical recitation methods:

"Question:—If you have one thumb on your right hand and one thumb on your left hand, how many thumbs have you on both hands?

Answer:—Since I have *one* thumb on my *right* hand and *one* thumb on my *left* hand, I have as many thumbs on my *right* hand and on my *left* hand as the sum of the thumbs on both hands. Therefore I have as many thumbs on my *right* hand and on my *left* hand as the sum of the thumbs on both hands, or two thumbs."

It is, as I gather from Mr. Stone's investigations, in the sort of logical analysis here grotesquely illustrated, that he finds much of the time devoted to arithmetic is wasted.

Dr. James used to say that it is not well for a man to philosophize on an empty stomach. It is equally true, perhaps, that it is unwise for a child to reason until it has a large and rich collection of concrete experience. This seems to be strongly suggested also by experimental studies by Meumann (20) and others, which indicate that children who think in abstract terms prematurely are below the average in intelligence.

Prof. Young (32, p. 17) in his excellent book on the teaching of mathematics expresses the belief that the chief value of the subject lies in the fact that "it exemplifies most typically, clearly and simply, certain modes of thought which are of the utmost importance to every one." One of these modes of thought, for example, is, as he explains, the ability to grasp the facts in a situation. Hygiene suggests the query whether this important aim may not itself be thwarted by beginning the instruction at too early an age when attention is likely to centre on the mere formal processes, and correction by reference to the facts of experience is not likely to occur.

The question of the age of beginning arithmetic is really a question of when instruction in logical thinking should begin. The answer in general terms is that training in logic should not begin until a child has a sufficiently rich experience to protect against a habit of thinking without regard to the truth of the major premise.

More concretely there seems then to be ample reason for postponing the work in arithmetic until the age of ten, or more accurately to that stage of mental development which is likely to be found in normal children at this age. While it is greatly to be desired that more investigations should be made in regard to this subject, with our present experience this seems to be a wise rule.

Of course the mere age of a child does not necessarily determine his ability to take up a given subject without injury to health and mental development. In individual cases it may be permissible for a child to begin work in arithmetic at an earlier age, but the safe rule from the point of view of hygiene is this: in all work in arithmetic previous to this age there should be no formal instruction. If the child has a genius for mathematics he will spontaneously anticipate work allotted to a later period, but parents and teachers should not set formal tasks in this subject for children of an earlier age.

In Germany there has been a great controversy in regard to the question of object teaching in arithmetic, or the use of *Anschauungsmittel.* One school maintains that number cannot at all be presented to sense perception, it is rather a concept of concepts, to be referred to the mind, and it would be futile to desire to objectify it to sense perception. Another class think, on the other hand, that number is meaningless unless it is rooted in the real soil of sense perception; and especially in the first instruction in arithmetic the objectification of number is absolutely necessary. Of those who hold to the latter view some would represent numbers by pictures or the like and others by an unbroken series. There is a vast literature on this point, (20) and many experimental investigations have been made. All this controversy interests hygiene relatively little; for if the instruction were postponed till the proper age, most of the devices would probably become unnecessary. That a certain real danger may be connected with their use is clear enough from the number arrests so commonly found by Triplett.

The one thing that is important in the early instruction is to begin with the number relations of the concrete things in the child's own experience. This is the natural and normal starting point; but the practice of the schools has largely been to reverse this order and to begin with rules and abstract number relations and then only in the last years of the course give instruction in applied arithmetic.

Much of the work in arithmetic for the lower grades has been too difficult. Several years ago a committee in Boston, at the head of which was President Walker, investigated the subject and found that in the Boston schools a good deal of the work in the lower and middle grades was really work in logic rather than in arithmetic, and it was severely condemned by them; and in general it was found that too much and too difficult work was required in this subject. (30.)

A concrete illustration of such work was reported by a New England superintendent a few years ago as follows:

"While inspecting a B grammar room I saw this problem aced upon the board, which the pupils were expected to perform. 'A grocer's quart measure was too small by half a gill. How much did he thus dishonestly make in selling four barrels of cider, averaging 34 gals., 2 qts., 1 pt. each, if the cider was worth 24 cents a gallon?' This is not an isolated case; it is only one of the many problems which teachers continually give and examiners require that are wholly above the heads of children and can only be solved by an adult with a pretty clear head for reasoning."

Mathematical puzzles have been frequently given in arithmetic from the time of the Middle Ages. An interesting collection is given in the work of Claude Gaspard Bachet de Mezériac, Problèmes plaisants, and the following is one commonly used:

"God greet you problem. God greet you with your 100 scholars! We are not 100 scholars; but our number and the number again and its half and its fourth are 100; how many are we?" (13, p. 160.)

It is still true that considerable of the work in arithmetic might be simplified or profitably eliminated. As Steuer remarked some years ago: "The whole arithmetical instruction urgently needs complete transformation. The pupils are wearied with the driest calculation of literal problems, they are deadened with the most inconceivable cram formulæ which are never used either in pure or applied mathematics."

The logical puzzles of the older arithmetics, the bastard logic as Gen. Walker describes it, and the complicated problems which have little or no relation to practical life, have at least no place in the earlier grades.

Steuer in his Methodik, (20 a) published in 1883, sifted and weighed the traditional material in arithmetic according to the law, "First, the essential and then the pleasant and useful." In Germany as in this country it is felt that time is wasted in arithmetic. Steuer following, if I mistake not, the general regulations of the ministry, recounted as essential the following parts of arithmetic: (1) simple examples with whole numbers under the fundamental rules of arithmetic; a part of the exercises with common fractions; simple examples under the fundamental rules of decimals, in reckoning prices, profit and loss, discount, damages and the like, simple examples in interest, in mensuration and in reckoning time. (2) Compound examples arising by repetition of the same fundamental operation or by natural and appropriate combination of different fundamental operations, in reckoning cost, in reckoning profit, interest, discount, and the like, in mensuration, in reckoning averages, in partnership and in various kinds of reckoning.

The following should, he thinks, be excluded. Written examples under the fundamental rules with numbers named in several different ways, a great part of the examples in reckoning time, part of the exercises in common fractions, the greatest part of the examples in simple proportion, the examples in compound proportion, a great part of the examples in interest, examples in changing decimals to common fractions, square and cube root and some other things might, he thinks, be omitted.

It is especially necessary also in this subject to eliminate unessential parts and unessential processes. That much time is wasted in such unessential elements is indicated by the investigations of Mr. Stone (27) and is corroborated by observation in the schools.

Finally, it is demanded that attention should be given by teachers to the hygienic aspects of instruction in arithmetic. In their attention to the primary product of their work, in their zeal for arithmetic as a subject and their devotion to pedagogical method and the practical demands of speed and accuracy, teachers often become blind to the obvious matters of hygiene; and the secondary results of instruction in this subject and the more subtle injuries to the mental health they are quite incapable of observing. Modern psychiatry and the study of mental hygiene unite with school hygiene in demanding that teachers should at least acquire such a prevision for matters of health that they shall be able to see when children become nervous and confused and when they are acquiring abnormal habits that will mean arrest of development. In the actual instruction attention to the hygienic aspects of the work was largely neglected in the older schools and is probably the exception to-day.

If we desired to make the subject as unhygienic as possible we should need to do little more than adopt methods that have been, and I fear are still in some places, in vogue. Prof. Safford (25), the well-known mathematician of Williams College, has given the following rules for making the work in arithmetic a failure, and they may be cited as an equally good code of instruction for making the work unhygienic. "First, divide your hours for arithmetic into theory, mental arithmetic and written, and in each division pay no attention to either of the others. Second, in theory proceed from abstract ideas. Third, arrange your mental arithmetic so that the children shall not employ any processes of their own. Fourth, have some special devices in mental arithmetic to throw dust in the eyes of the public. Fifth, in written arithmetic let each child do the sums from a book imitating a process which has been shown him but not explained. Let every one go on for himself, if he gets the right answer (by the key which you keep) say right, if not say wrong, and leave him to find out for himself how to get a better result. Sixth, large numbers, unintelligible denominations, matters which the children do not understand, all these should be thoroughly employed."

It is the province of pedagogy to decide what shall be the content of the course in arithmetic and what methods and devices shall be employed, as well as what results in this subject may be reasonably expected. But practically the whole attention of many teachers seems to be directed to the primary results. They consider solely the methods, the ground covered, the total results in speed, accuracy, etc. The secondary results,—the habits of thinking formed, the mental automatisms acquired, the possible arrests of development, and the like, they do not attend to and they do not see; and often they are innocently and profoundly ignorant of the possibilities of their existence.

School hygiene has no quarrel with arithmetic. It does not object to drill nor to the devotion of a reasonable amount of time to the subject; but it does insist that the obvious dangers to health connected with this study in the case of some children should be duly regarded, and it insists that in all cases the secondary results of the instruction should not be ignored.

From the point of view of hygiene, work in mathematics represents a valuable form of mental exercise. Even in its more formal aspects it is a sort of gymnastics of attention and should be a source of mental refreshment and pleasure. If rightly taught it has the great advantage of giving a form of mental exercise where there is relatively little danger of confusion of association. In regard to what its real value as mental gymnastics consists in, what are right methods, suitable topics for instruction, and proper sequence, there has been much conflict of opinion.

Jean Paul Richter would place the instruction in arithmetic at an early stage in a child's development, because in his opinion arithmetical work requires no thinking and consequently puts no strain upon the child's nervous system. The great pedagogical poet probably in this case as usual saw an important aspect of the truth. It is doubtless true that the mere consideration of quantitative relations in connection with the activities of childhood involves no strain, and hygiene makes no objection to this, provided it is merely incidental to proper motor training and the study of things. And again Sir William Hamilton, already quoted, maintained that the routine of demonstration in mental training is analogous to the treadmill in the gymnastics of the body.

It has been a matter of general belief, however, that work in mathematics furnishes a high form of mental training.

Pestalozzi was one of the first in modern times to emphasize the significance of arithmetic for formal discipline. The aim of instruction, according to him, is to lead one to think while reckoning and to reckon while thinking. And Whewell, whose book on the Study of Mathematics was the occasion of Hamilton's critique, regarded mathematics as a logical discipline. In more recent times, however, many educators have taken a different view. Knilling, for example, declares that the mind never works more mechanically than in arithmetical computations, that it deals merely with words and symbols.

Between these extremes of opinion hygiene gets the right perspective by considering the psychology of the arithmetical processes.

Experimental pedagogy is now attempting to determine the facts in regard to the association processes involved in arithmetical operations, the ability of different mental types in such operations, the normal variations of ability with age, and sex; and especially the individual variations, and the value of different methods, with relation to different types and forms of ability, the value of discipline in this subject in relation to other school subjects, the value of drill, the secondary effects of different methods of learning and instruction, etc. From the results of such investigations it is to be hoped that the psychology of mathematics may be made so clear that methods may be devised which will develop individual capacity, and avoid interference of association and all those secondary results injurious from the pedagogical as well as hygienic point of view.

Dr. Lessing (16) has pointed out that there are two types of children; on the one hand, those naturally introspective who take pleasure in mathematical combinations and mathematical speculations; and second, those who are extrospective, who are early interested in observation of nature, in collecting plants, stones, in observing animals, and the like. The latter are interested in the qualitative details and peculiarities of the concrete case. The former are apt to reflect on the concrete case and seek the typical, the general, or the abstract universal. This distinction can be traced in the history of thought. In antiquity we have the contrast in the Greek natural philosophers and Eleatics on the one hand, and the Atomists and Pythagoreans on the other. The antithesis appears later in Plato and Aristotle, and in modern times in the scientists on the one hand and the special mathematicians on the other.

Experimental pedagogy is studying also the types of mental imagery in relation to arithmetical learning. Lobsien (17) in a study of fifty pupils of the average age of nine or ten in the fourth school year of a boy's school, found that number-memory and ability in written arithmetic are unrelated functions, that the former stands in an inverse correlation to ability in mental reckoning. Only a small fraction of the pupils use visual number images in reckoning. It is quite different with acoustic number memory. There is a relation between this and both written and mental reckoning. Thus as a general result he finds that for elementary reckoning the acoustic number memory is almost exclusively the form of imagery used. This problem of the type of imagery involved in numerical operations and many other problems now being studied by experimental pedagogy are of distinct significance also to the hygiene of instruction.

It is possible also that the study of the natural ability, the methods employed, and the reaction time of pupils in arithmetical work may throw an important light on the problems of psychological age or mental development.

Experiments by Dr. Ranschburg in Budapest (23), for example, indicate that the time occupied by children in subtraction is an indication of their mental condition. The subtraction time for the majority of normal pupils in the people's schools for the weakest, slowest reckoners was 2 seconds or less for 60.9%, and more than 4 sec. in the case of only 8.7%. Among the feebleminded pupils in the special classes 40.7% had a subtraction time of more than 4 sec. and only 14 of 2 sec. or less. Dr. Ranschburg estimates that subtraction times of 2 sec. or less among children of the age from 9 to 12 indicates intellectual normality with the probability of more than 90%, and subtraction times of more than 3 sec. among children in the schools up to the age of 7 or 8 may be considered as normal; after 8 years of age subtraction times of more than 3 sec. indicate mental deficiency with the probability of more than 90%, subtraction times over 4 sec. with the probability of about 100%.

Mr. J. C. Brown (5) has studied the effect of drill periods in the case of 51 pupils, and his results suggest the distinct advantage of such drill. Five minute drill periods upon fundamental number facts preceded the daily lesson in arithmetic in three grades. By comparison with other sections of equal size and approximately equal ability who had no such drill, they were distinctly superior. The benefit included increased efficiency in arithmetical reasoning and persisted after a lapse of twelve weeks vacation.

Thorough drill in the fundamental arithmetical processes is probably important for the thorough organization of knowledge which is essential for healthful progress in more advanced work.

It is only by experimental study of such psychological and pedagogical problems that a firm foundation for the hygiene of instruction in arithmetic can be laid, and a vast amount of careful investigation is here needed. In the present state of our knowledge the important practical rules in the hygiene of instruction in arithmetic may be summed up as follows:

Formal instruction in this subject probably should not be begun until the age of eight or ten. Whatever arithmetical work is done before this age should be spontaneous on the part of the pupil. By postponing the instruction until this age it would probably be possible in most cases to do away with the artificial devices and methods liable to cause arrests or interference of association. The work at first should be simple and complex, and difficult processes should be postponed until a later period. Processes involving logic should not be given until the pupil has acquired a rich store of concrete experience. Special care should be taken in the case of nervous children that no tasks or methods employed should be the occasion of worry or of the development of neuroses like chorea. Special attention should be given in general to the secondary effects of instruction important from the point of view of mental hygiene.

BIBLIOGRAPHY

1. BAADE, WALTER. Experimentelle und kritische Beiträge zur Frage nach den sekundären Wirkungen des Unterrichts insbesondere auf die Empfänglichkeit des Schülers. Leipzig, Nemnich, 1907. 124 p.
2. BAILEY, M. A. The teaching of Arithmetic in Elementary Schools. N. E. A. Proc., 1905. pp. 380-387.
3. BALLARD, P. B. The Pitfalls of the Practical Teacher. *The Jour. of Educ.*, July, 1908. (London.) pp. 453-456.
4. BRADFORD, MARY D. Reasoning in Arithmetic. *The School Century*, Jan., 1910, Vol. 5, No. 5.
5. BROWN, J. C. An investigation on the Value of Drill Work in the Fundamental Operations of Arithmetic. *The Jour. of Educ. Psychology*, Feb., 1911, Vol. 2, No. 2, pp. 81-88.
6. BROWNE, C. E. The Psychology of the Simple Arithmetical Processes: A Study of Certain Habits of Attention and Association. *Amer. Jour. of Psych.*, Jan., 1906, Vol. 17, No. 1, pp. 1-37.
7. BURNHAM, Wm. H. Hygiene of Arithmetic. *Cyclopedia of Education*. N. Y., 1911. pp. 207-209.
8. COURTIS, S. A. Measurement of Growth and Efficiency in Arithmetic. *El. School Teacher*, Oct. and Dec., 1909. pp. 58-74, 177-99.
9. FINDEISEN, A. Forderungen der Gegenwart an den Rechenunterricht der Volksschule. *Päd. Abhandlngen.* XI., 8, pp. 141-154.
10. FITCH, J. Educational Aims and Methods. N. Y., 1900. 448 p.
11. HAMILTON, WM. Thoughts on the Study of Mathematics as a part of Liberal Education. By the Rev. William Whewell. *Edinburgh Review*, 1836, Vol. LXII, pp. 409-455.

12. Huther, A. Korrelation zwischen Zahlengedächtnis und Rechenwertung. *Zeit. f. Päd. Psych. und experimentelle Päd.* Leipzig, 12. Jahrg, Heft 2. pp. 121-125.
13. Jackson, L. L. The Educational Significance of Sixteenth Century Arithmetic. N. Y., 1906. pp. 23-228.
14. Jänicke, E. Geschichte und Methodik des Rechenunterrichts. In Kehr's Geschichte der Methodik, Vol. 3, pp. 1-181. Gotha, 1888.
15. Kempe, Wm. The Art of Arithmeticke in Whole Numbers and Fractions. Written in Latin by P. Ramus: London, 1592. 8°. See Bureau of Education Report, 1904, Vol. I, p. 685.
16. Lessing, T. Pädagogik und Psychologie der Mathematik. *Zeit. f. exper. Pädagogik.* Leipzig, 1909, Bd. IX. Heft 3/4 pp. 225-237.
17. Lobsien, M. Korrelationen zwischen Zahlengedächtnis und Rechenleistung. *Zeitschrift f. Päd. Psych. und exper. Päd.* Leipzig, 12 Jahrg. Heft I. pp. 54-60.
18. Lupton, S. The place of Arithmetic in a Liberal Education. (London) Journal of Education, June and July, 1908. pp. 431-434 and 497-499.
19. Mercante, V. Enseñanza de la Aritmetica. Libro I: Psicologia de la Aptitud matematica del niño, 390 Seiten, Bueno-Aires, Cabaut y C-ia. 1904. Reviewed at length by B. Schanoff in *Zeit. f. Experimentelle Päd.* Leipzig, 1909. IX Band, Heft 3/4 pp. 288-304.
20. Meumann, E. Vorlesungen zur Einführung in die experimentelle Pädagogik und ihre psychologischen Grundlagen. Leipzig, 1907. Das Rechnen, in Vol. II. pp. 329-360.
21. Patrick, G. T. Number Forms. *Popular Science Monthly*, 1893, Vol. XLII, pp. 504-514.
21a. ——, ——. Should Children under Ten Learn to Read and Write? *Popular Science Monthly*, 1899. Vol. LIV, pp. 382-392.
22. Peirce, C. S. On the Algebra of Logic. Cambridge, 1870.
23. Ranschburg, P. Zur physiologischen und pathologischen Psychologie der elementaren Rechenarten. *Zeit. f. Exper. Päd.*, 1909, IX Bd., Heft 3/4, pp. 251-263.
24. Rice, J. M. Educational Research; Causes of Success and Failure in Arithmetic. *The Forum*, January, 1903, pp. 437-452.
25. Safford, T. H. Modern Teaching of Arithmetic. *Atlantic Monthly*, May, 1891, Vol. LXVII, pp. 668-675.
26. Smith, D. E. The Teaching of Arithmetic. *Teachers Col. Record*, X, Jan. 1909, pp. 1-100.
26a. Steuer, W. Methodik des Rechenunterrichts, Breslau, 1883.
27. Stone, C. W. Arithmetical Abilities and Some Factors Determining them. N. Y., 1908. 101 p.
28. Sturges, O. School Work and Discipline a Factor in Chorea. *Lancet*, Jan. 3, 1885, Vol. I, pp. 9-10, and *passim*.
29. Triplett, N. Pedagogical Arrests and Peculiarities. *Ped. Sem.*, June, 1905, Vol. 12, pp. 141-157.
30. Walker, F. A. Arithmetic in the Primary and Grammar Schools. In his Discussions in Education. N. Y. Holt & Co., 1899. pp. 209-232.
31. Woodlove, J. R. A Kindly Arithmetic Master. *The Journal of Education* (London), March, 1906, pp. 219-220.
32. Young, W. H. Teaching Arithmetic. *Education*, Jan., 1909, Vol. 29, pp. 267-75.
33. ——, ——. The Teaching of Mathematics in the Elementary and the Secondary School. N. Y., 1907. 351 p.

HUMAN EFFICIENCY [1]

A Plan for the Observational, Clinical and Experimental Study of the Personal, Social, Industrial, School and Intellectual Efficiencies of Normal and Abnormal Individuals

By J. E. Wallace Wallin, Ph. D.,
Clinical Psychologist to The New Jersey State Village for Epileptics at Skillman

The questions of first importance in the study of mental defectives are the questions of etiology, remedy and criminal responsibility. Etiology naturally claims a large share of consideration, because it is only after the etiological factors or agents of different abnormalities have been precisely determined, that we are in a position to prescribe effective remedial and prophylactic treatment, or to deal successfully with the educational problems affecting defectives.

The criminal and legal aspects likewise deserve a large measure of attention. Various forms of mental abnormality predispose toward criminality. It is of vital social importance to determine what types or classes of defectives lack moral insight, an appreciation of moral values, the ability to distinguish between right and wrong, or truth and error, the power of self-control, and the feelings of shame, obligation and guilt. What classes of defectives are incapable of living in a normal human environment? How do criminalistic tendencies and moral discernment vary with degree of defect, type of disease (*e. g.*, delusional insanities, epileptic manias), duration of disease, transitory states (well known are the occasional or transitory states of moral irresponsibility in some form sof epilepsy and in delusional and maniacdepressive forms of insanity, which show themselves in maniacal outbursts, and kleptomaniac, suicidal and homicidal tendencies), and environmental conditions? The obligation of the state properly to protect the lives of its subjects, renders the study of questions affecting the moral responsibility of various kinds of defectives of fundamental social importance. The solution of the practical educational, custodial and legal problems concerning defectives will hinge largely upon the answers which scientific investigation gives to questions of this nature.

---

[1] Read, in part, before the New York Branch of the American Psychological Association, Feb. 4, 1911.

Owing to the limitations of space it is impossible to enter upon a discussion here of the numerous questions connected with the psycho-clinical examination of defectives. The reader is referred to a companion article in the March and April numbers of the Journal of Educational Psychology, which treats of the functions of psycho-clinical laboratories in universities, medical schools, hospitals for the insane, institutions for the feeble-minded, juvenile courts and the public schools, and which discusses the qualifications needed by psycho-clinical examiners.

While the medical and legal questions are thus of commanding importance, it is also important to secure accurate knowledge concerning the personal, social, industrial, school and intellectual capacities and incapacities of various grades and classes of defectives, such as idiots, imbeciles, morons, laggards, epileptics and insane, blind, deaf, mute and crippled persons. There are thus five sides to the question of efficiency.

First of all, what is the *personal* efficiency of a given grade or class of defectives? What can the individual do for his own care and protection'? Can he feed and clothe himself, avoid dangers and temptations, control the primal instincts of appetite, sex, love, hate, anger, fear, jealousy, pugnacity, etc.? Where does he stand in the *personal efficiency* scale? What is the amount of his *personal efficiency retardation*, as measured in terms of the personal capacities of a normal person of the same age? The answer to these questions involves the establishment of *age norms* of *personal efficiency*—a task that probably cannot be done with any nicety except for the first years of life.

In the *second* place, what is the nature of the *social* capacities or incapacities of a given defective, or a typical defective of a given class? Is the individual able to communicate his ideas or desires through written or oral language or through cries or gestures? Can he converse coherently or intelligently? Does he seek or avoid social intercourse, conversation, entertainments, games, etc.? Is he socially-minded or anti-social? Is he chummy, entertaining, generous, sympathetic, timid, retiring, fretful, suspicious, deceitful, quarrelsome, slanderous, brutal, murderous, lascivious, sexually immoral, subject to exhibitionism, or negativism, lying, thieving, etc.? Does he fit into the social organism? Can he so adjust himself to the customs and rules of society that he will not become a public menace? In short, what is the character of the individual's social deviation? What is his *social efficiency* age? Is he on the level of the morally undiscerning civilized young child, or in the stage of the brutal adult savage?

In the *third* place, what is the *industrial and vocational*, or *motor*, efficiency of various defectives? What kinds of work can they do, and how well? How much can they do for their own support? What particular capacities are present or lacking? What special existent occupational interests may be utilized? What is the individual's attitude toward work and toward supervision and correction? What are his learning capacities? What working habits can he form? What new tasks can he master? To what extent are his industrial capacities improvable by training? What is his best line of work? How does his industrial efficiency vary from time to time? (Witness the striking variations in epileptics.) What is the productive capacity of a given defective in comparison with a normal person of like maturity, and to what extent can the productive capacity be increased? In a word, what is the *amount* of the *motor* or *industrial defect,* or what is the *motor and industrial age,* of a given defective? These questions demand solution before the pedagogy of the industrial and vocational training of defectives can be placed upon a satisfactory basis, and before the labor of the patients in institutions for defectives can be so organized as to afford maximal returns.

In the *fourth* place, what is the nature of the *academic* or *school* capacities of different grades and classes of defectives? What sort of lessons can be mastered? In which branches do they make progress? Which subjects are worth teaching? What methods must be employed to obtain maximal results? How does the *rate* of progress differ from the normal rate (the rate with normals)? What is the precise rate and character of the improvement from month to month or year to year, as measured by scientifically devised serial tests of equal difficulty, of those mental functions which are central in the learning process; namely, perception, attention, association, memory, imagination, linguistic construction and reasoning? What sorts of improvement prove to be permanent, what merely transitory? What are the special difficulties of a given defective? What are his native or acquired interests, attitudes, ability to observe, judge, reason, form habits, adapt himself to changed schedules and new conditions, to learn by instruction, or imitation, or hit-and-miss experimentation, or repetition (drill processes), or reasoning? How many years *over-age* is the child for his grade? That is, what are the nature and extent of his *pedagogical retardation?* What is his *pedagogical age?* We cannot hope to adapt our curricula to the varying needs of defective children until we have thrown the search-light upon these vital school problems.

Finally, we have the basal question of the *character of the intellectual disorganization* and the *degree of the intellectual arrest* of various defectives. This question is fundamental, because all the other capacities depend more upon the intellectual integrity of the individual than upon the integrity of any other group of functions. Here we must ascertain, not so much the range of the individual's information or his *erudition*, as the degree and character of his *native* and *acquired* intellectual *grasp, capacity, or ability.* Is his intellectual development normal, or has it been arrested from the start, or has it become atrophied with time? What particular intellectual functions have suffered the greatest impairment? Where along the intellectual highway from the low grade idiot up through the imbecile, moron and laggard to the normal person, has the individual stopped? What, in a word, is the individual's *intellectual age?* Can this be determined in definite units, or by diagnostic age tests, more precisely than can be done by observation or by the use of school grades?

The above are fundamental questions which must be properly answered before we can presume to deal intelligently with the problems affecting the housing, segregation, care, treatment and education of public school and institutional types of defectives, or before we can deal intelligently with normal and supernormal children.

At The New Jersey State Village for Epileptics[1] we are attempting, in addition to medical, hereditary, and anthropometric research and cognate lines of psychological work, to throw some light upon these questions by observational, clinical and experimental methods, and have prepared a series of record blanks on which to record the data. These forms are uniform in size with the other forms in use in the institution and are so made that they can be gathered into book form, and thus provide a *case history* for each patient.

In order to determine the patient's *intellectual* status we are giving the *form board test*, which throws light upon the patient's ability to visually identify forms, upon his constructive capacity and his power of muscular co-ordination; the *hand dynamometry test*, which roughly tests the power of voluntary attention and effort, and particularly the power of muscular exertion; the *Binet-Simon diagnostic tests* of intellectual development (all of the above are on *Form I*); and a set of six *serial* or *consecutive controlled group tests* (*Form V*[2]). The latter tests are given serially (at present one set each month) to somewhat over thirty of our brightest epileptic school children, and to somewhat less than 100 dull, average and bright pupils from the second to the third high school grades in the public schools of Hopewell, N. J. Owing to our late start these tests can run this year only during six months; it would be better to give them once every second month during the course of a year; and, after norms have been established, once or twice a year. These group measurements embrace tests of the mental processes fundamental to intellectual operations (perception, attention, association, memory, imagination, and linguistic construction; tests of learning capacity are not included in this year's set. The aim has been to make each of the six successive tests in the same series equally difficult, and all so difficult that no one can make a perfect score, so that they may serve as an experimental *measuring scale* of the growth and improvement which various mental capacities or traits undergo from month to month or year to year. By giving them under the same conditions they will also afford a reliable *comparative scale* by means of which to measure the differences in the capacities of various classes of children and defective children, (normal, bright, dull) and the differences in the rate of improvement in these capacities. Several of these tests were originally prepared for use with a "dental squad" of Cleveland school children receiving special prophylactic and operative dental treatment, in order to measure in definite units the effects of such treatment upon mental efficiency. The use of these tests for this purpose during the past year has given gratifying results. By carrying out such tests as these, from season to season, or year to year, upon large numbers of normal, supernormal and retarded pupils in the schools, we shall be able to plot a *normal curve of improvement* or *development* of various mental traits, and thereby obtain more precise knowledge respecting the *development defects* or accelerations of abnormal children. The twelve tests which I have worked out—two are repeated during the following sitting in such a way as to transform them into new tests—may not afford the best measuring scales, but they furnish an initial set which can be altered and improved as experience demands. The materials for these tests, together with the directions for giving them, will appear in print in due course.

---

[1] A laboratory of clinical psychology was established by the Board of Managers at this institution, on the recommendation of the superintendent, Dr. D. F. Weeks, in the fall of 1910.

[2] Four of the forms were distributed at the meeting. Form I also contains a number of miscellaneous tests; Form II deals with the "effect of convulsions on mental traits and capacities;" Form II is a "personal, social and industrial efficiency report;" Form IV is a "school efficiency report;" and on Form V is recorded "serial experimental tests of the growth and improvement of mental traits and capacities."

The Binet-Simon measuring scale, with which we have made a survey of the entire village, enables us to make quite a satisfactory determination of the degree of intellectual arrest. The tests, however, are vulnerable in their present form at various points. First, the *methodological technique* has not been sufficiently refined or standardized to meet with the fundamental prerequisite of all scientific work, namely the establishment and employment of *controlled* and *standardized* conditions of testing, so that the experimental procedure can be exactly repeated. The further standardization of the tests cannot be made until they have been thoroughly tried out by expert examiners. By actual testing we shall acquire the best methods of giving the various tests.[1]

Second, the scale requires *revision*, *rectification* or *amplification* at various points. Some of the individual tests are out of place, either too high or too low; the aggregate difficulty of the tests for a given age may be greater than that for a higher age; some tests are of questionable utility, notably those for the higher ages; the tests need to be extended so as to include more of the teens, and this is more difficult because in the teens one year makes less difference in intelligence than one year during the early years of childhood. Moreover, it is not yet certain whether the scale is applicable to the higher grade adult dements or to slightly retarded adolescents (it seems to apply fairly well to most *demented* idiots, and particularly to *amented* idiots, imbeciles and low grade morons); nor is it certain that the same tests are applicable to both boys and girls, except during the preadolescent period, owing to the difference in the physiological, psychological and pedagogical maturity of boys and girls of the same chronological age.

Third, after the tests have been repeated sufficiently often in a given school or locality to render them *familiar*, it is possible for the higher grade examinees to compare notes and *coach* one another. This will enable some pupils to pass the tests beyond their intellectual age, and will transform the measuring scale into a series of tests of the *ability to learn particular facts* or to acquire particular accomplishments, by dint of direct instruction. But the scale is not designed to test the momentary capacity to acquire a *determinate set* of *facts* by *special instruction*, but to measure the capacity to solve certain problems without special preparation. They are intended to be a measuring rod of the intellectual capacity or strength which normal children of various ages and of a given type of civilization should have developed as a result of normal growth and development. They thus supply a series of *age norms* of native and acquired mental capacity; not of *native* capacity only, as has been assumed. It would be fatuous to attempt to construct a scale for the measurement of pure native capacity, for pure native capacity, after the first few month's of life, is a pure figment of the imagination. Only by excluding the physical and social environmental influences would there be any possibility of measuring native endowment independent of acquired capacity. A measuring scale will therefore measure both native and acquired capacity. Just as native capacity differs with individuals, so will the capacity to acquire differ with individuals; but there is probably a certain *rate* of acquisition which is fairly *normal* in a given order of civilization, so that it will be possible to establish *norms* which hold for the great mass of average or typical individuals.

---

[1] For suggestions consult the following: Binet and Simon: Le développement de l'intelligence chez les enfants, L'Année Psychologique, 1908; Goddard: Binet's Measuring Scale for Intelligence, The Training School, VI, No. 11, 1910; Whipple: Manual of Mental and Physical Tests, 1910, Chapter XIII.; Huey: The Binet Scale for Measuring Intelligence and Retardation, The Journal of Educational Psychology, I, 1910, 435; Johnston (Katherine): An English Version of M. Binet's Tests for the Measurement of Intelligence, Training School Record (London), November, 1910. (The tests for age 11 are here transferred to age 12, leaving 11 unsupplied; the tests for age 12 are moved up to age 15; and the 13-year old tests, with two additions, become tests for ages beyond 15. This rearrangement probably meets with Binet's approval, since the revision was submitted, according to the author, to his criticism.)

Fortunately the difficulty of which we have just spoken—the possibility of being coached so as to pass some tests—can be met by devising *substitute* or variant forms of equal difficulty for some of the tests.

Fourth, the corrective formula, or the method of giving advance credits (one year for every five points passed in higher ages) sometimes creates difficulties. This is due to the fact that the number of tests in the various ages is not uniform. In four ages it is four (ages 4, 5, 10 and 12); in two it is five (3 and 11); in two six (8 and 9); in one seven (6); and in one eight (age 7). The consequence is that the subject sometimes receives too few and sometimes too many credits. To illustrate cases from my experience: if the subject passes age six by virtue of two failures in age seven, he can obtain one and one-fifth year of credit for age seven; *i. e.*, one-fifth of a year more credit than if he were credited outright as having passed age seven. The maximum discrepancies which I have found arising from these inequalities have amounted to about a year. This difficulty, however, is not innate in the tests themselves, and can be overcome by equalizing the number of tests in each age, and revising the corrective formula as may be needed.

The above are some of the criticisms suggested by the use of the Binet-Simon tests with somewhat over 350 epileptics. The fact that the tests have not been brought to a state of perfection makes it all the more imperative that they should be tried out with great *thoroughness* on a large number of mentally and physically normal public school children, so that we may locate the weak spots and construct a scale which will be valid for the typical American child. When returns have been collated from a large number of such tests, given under uniform conditions, we shall be in a position to eleminate, revise and amplify. This is *one* way in which the tests can be successfully improved. But it is necessary to emphasize that the testing must be a *thorough-going try-out*. To examine five or six pupils in an hour at a given level in the scale means partial and perfunctory work, and will render the try-out essentially unscientific. We cannot hope to establish reliable norms for children by a slap-dash examination of wholesale quantities of pupils. It is better to try the scale out thoroughly with 1,000 pupils than partially with 10,000.

A second way in which to improve the scale, is to undertake a systematic survey of the intellectual capacities of normal boys and girls at different ages. What, *e. g.*, can the typical six-year-old or 12-year-old boy or girl do intellectually? To answer this question fully we need to gather and compile extensive observational data from classroom teachers, expert paidologists, parents and intelligent observers who come into direct daily contact with children.

At the Skillman institution we are attempting to gather such data for our epileptic school children by means of a syllabus on the school efficiency of the pupils. School efficiency depends primarily upon intellectual capacity and thus furnishes an index of intelligence. From these reports, made by the teachers, we hope to gain information regarding the characteristic intellectual capacities of epileptics of various chronological and Binet-Simon ages and of various degrees of arrest. This information will possess a unique value when brought into correlation with other reports and the various experimental tests. As soon as we have extensive data of this character for large masses of normal children, we shall not only know something definite regarding the intellectual capacities of children of different ages, but we shall have taken an important step toward the construction of an adequate measuring scale of intellectual development. Such a programme of work as this can only be carried to a successful conclusion by a properly organized and a well-manned department of clinical psychology, or bureau of research, in the public schools, in a university, or in an endowed private research foundation.

It is probably not necessary to hold a brief in this day for the necessity of undertaking such a survey as this. There is a vast army of repeaters in the schools which threaten to become a national menace. Statistics[1] from all sections of the country show that about half of the pupils in the public schools are retarded; that is, that they are two or more years over-age for their grade. At the present time, our ignorance concerning, and our neglect of, the best care, treatment and education of arrested children, stand out as a national disgrace. We know little at present that is scientifically accurate regarding the degree or character of the physical and mental arrest of our repeaters. We do therefore stand in need of comprehensive serial graded tests of intelligence, so that we may determine, not only the intellectual age of deviating children, but the nature of the mental functions most seriously affected, and the character of the arrest (whether permanent or temporary). It is sheer folly to spend millions of dollars trying to educate children for an intellectual career, who are permanently retarded. There are instances on record where arrested pupils have made practically no progress during a dozen years of schooling, or where they have actually retrogressed. We have with us 19-year-old epileptics who are doing second and third year work. We should be able to determine by means of a scientific diagnostic (intelligence) scale whether a given subnormal is a custodial or institutional case, or a case for one of the special classes in the public schools (for retarded, blind, deaf, mute children, etc.). Binet has given us a "first-aid-to-the-sick" device, just at the time that we are awakening to a realization of the magnitude of the problem of mental deficiency.

While the *intellectual measuring rod* is fundamental, we stand in need of a *motor scale* of development, or a combined intellectual-motor scale. This need arises from the fact that a sixteen-year-old child chronologically may have a twelve-year-old intellect and a fourteen-year-old musculature. Such a child is reasonably strong muscularly; he is able to execute and co-ordinate his movements with skill; he can perform quite complicated manual operations; he can master fairly difficult industrial tasks; he can retain motor acquisitions, and form stable muscular habits. Although he may be accounted an intellectual laggard, he ranks quite high in motor capacity and manual dexterity—a fact which is being demonstrated day by day in the manual training and industrial classes in the public schools. Such a child would, then, be fairly normal on the motor side.

Since, therefore, the intellectual and the motor developments will not in all cases coincide, we need a series of *motor*

---

[1] See *The New Clinical Psychologist and the Psycho-Clinicist*, The Journal of Educational Psychology, April, 1911.

diagnostic tests arranged in a graded scale, in order that we may know what a normal girl and boy can do industrially, or in a motor sense, at different ages. It should be possible to construct such a scale for, at least, the periods of childhood and early adolescence. Having both the intellectual and the motor scales, separate or combined, we shall be in a position to say whether the child's defects involve in equal measure the intellectual and the motor functions, or which of these two have suffered the most impairment, and to what *extent* the arrest has set in. The pedagogical value of such a differential diagnosis is obvious. Instead of allowing teachers to consume their energies and the energies of the pupils for years, trying by some sort of intellectual legerdemain to fit round boys and girls into square holes, we shall be able to prognosticate by means of standard tests the probable future pedagogical development of the arrested child, and thereby be able to plan a course in which he will make the greatest progress. This will not only redound to the good of the child, but prevent much pedagogical blundering, loss of time and money, and vexation of spirit.

Unfortunately there is no existent motor or industrial scale of development for normal children, comparable with the Binet-Simon intellectual scale. At Skillman we are making an attempt to construct such a scale for epileptics, by collecting extensive observational data from the officers, supervisors, attendants and employees of the institution, bearing upon the industrial capacities of the patients who are employed in various forms of indoor and outdoor work. From the results thus obtained we are hoping to construct a *motor scale of development* for each Binet-Simon age. It is evident that such a motor scale would possess greater value if we were in a position to turn, for purposes of comparison, to a motor scale for *normal* and supernormal individuals. The need of a normal industrial scale is felt as keenly by the student and trainer of the special child, *whether* subnormal or supernormal, in the *public* schools, as by the student and trainer of institutional types of defectives. Departments of child study in the public schools and research departments in institutions for defectives should make an attempt to gather extensive industrial or motor data by some such means as those we are now using.

Finally, we are also securing detailed reports on the *personal* and *social* traits and capacities, the *moral* characteristics and *criminal* tendencies of our patients. The data on the personal capacities will supply additional material for our comparative measuring scales. There is need of a similar systematic study particularly of the moral and criminal traits of the abnormal, mischievous and delinquent pupils which people our schools, and of the criminals which menace our civilization. This data should be secured, in the first instance, for the socially maladjusted child in the preadolescent years, before the criminalistic tendencies have become confirmed. Only when we have in our possession extensive facts of this character will we be in a position to place our pedagogical and moral training and prophylaxis, and our custodial care and treatment of abnormal and criminal individuals upon a satisfactory basis.

When we have given the same amount of careful, expert study to our normal and abnormal human population that the government is giving to Indian corn or the American hog; when we have devoted the same scientific attention to the production of superb brain crops that experts, under government subsidy, are now giving to the growing of superior grain crops: then we may hope to make education a genuine science, and the institutional training, care, treatment or penalization of defectives, dependents or criminals a real art. The view that public institutions, in addition to their recognized duties, should function as research laboratories, is rapidly gaining wide acceptance. Just now we stand in great need of extensive *mass* studies: a broad survey of the total field of human capacity. It is with this idea uppermost that we have prepared a set of *efficiency* blanks at Skillman for the systematic recording of observations. The method at present must necessarily be somewhat crude. But in time we shall have just as refined a technique for studying the human plant as we now have for studying chickens or horses.

INTELLECTUAL PRECOCITY. COMPARISON BETWEEN JOHN STUART MILL AND THE SON OF DR. BORIS SIDIS

By Tom. A. Williams, M. D.

Instances of juvenile precocity have attracted attention in every epoch of historical time. At one time they were regarded as *lusus naturæ:* they were supposed to be allied with genius, and each was thought to be insusceptible of explanation and beyond human control.

Nowadays, however, both precocity and genius are subjects of study, and are coming to be regarded as both explicable and controllable, within certain limits. We have now transcended the erroneous doctrine of Lombroso that genius was related to criminality. When the genius is criminal he is so independently of the qualities we call genius. These, however, draw attention to his criminality by the very distinction they give to all his deeds.

Of precocity, the relationship to neuroticism has often been declared; but our analysis will show the error of this view unless it is greatly qualified. While it is true that many children apparently precocious in an intellectual sense are unstable mentally, incapable of sustained effort, and become adult nonentities without special capacity, yet these misfortunes are by no means functions of the precocity of these individuals; but are due to faulty bodily hygiene, intemperate and ill-timed mental labor and to excessive emotional stresses in an individual who has not learned to master the moods.

As a matter of fact proper mental labor is needed for sound psychic health. Physiologists know that a disused organ is more liable to disintegration or to become diseased than one which is regularly used. I need not expand what is an axiom.

But an impression prevails that growing organs should not be subjected to work. This is a gross error; for organs which do not work cannot grow well. Even the bones become tough, hard and large in proportion to the stresses to which they are subjected by frequent and vigorous pulls where the muscles are attached. The comparison of the average male skeleton with that of the average female strikingly illustrates this fact. But proper development is possible only during the period of growth, the growth in adult structure being relatively slight, however great is the exercise of function. What is true of structure is true of functional power. From ballet dancers to violin virtuosi, artists must be trained from early youth. It may be objected that this is so because muscular agility is required; but this objection is only superficial; for dexterity of an artist is made possible not in virtue of superior co-ordinations of movements themselves but by means of the superior speed and accuracy of the guiding mental processes, which reside in the brain.

Now as intellectual dexterity is also a function of orderly functioning of mental processes seated in the brain, it should be manifest that these too should reach excellence best when they are trained by a capable hand during the formative period of early youth. This *a priori* assumption I believe to be borne out by experience; for in the cases of those children who have been deliberately guided to intellectual or other excellence, their trainers and the pupils themselves, when qualified to judge, unite in declaring that the precocious individual is in reality not *naturally* extraordinary.

John Stuart Mill, himself, declares that both in memory and understanding he was considerably below the average of boys of his age; in spite of which his early training gave him what he declares to have been an advantage of twenty-five years over his competitors in after life. Dr. Sidis, himself, states explicitly that his boy's apparent genius is only due to the training of his intellectual activities in early life; although he invokes in partial explanation a doctrine of reserve energy of which we shall speak at a future time.

In the moral sphere the same may happen. Eleanor Davids took from an orphan asylum an entirely ordinary boy aged five, of bad behavior, without ethical notions; and in one year she trained him into a well-mannered, truthful youngster far above the average.

The Guidance of the Inclinations and the Formation of Tastes as a Factor in Successful Education. The tremendous generalizing power and analytic profundity of Herbert Spencer led him to the conclusion that human actions did not spring mainly from intellectual motives, but that they were chiefly instigated by the feelings. Although Descartes wrote a whole treatise on the passions of the soul, the study of the feelings has only recently acquired its due place among psychologists. It is to the psychopathologists that great credit is due for the stimulus which the study of the feelings has lately received. It is in the psychopath that the exacerbations of feeling become so conspicuous as to excite the attention even of the superficial. From the well marked types of *affective*[1] reaction recognized by observing insane, perverted or peculiar people, it has become possible to apply the generalizations gained from pathology in the interpretation of the occurrences of ordinary life. In this way we have found a key to unlock many of the motives of ordinary life which escape analysis when regarded as intellectual manifestations only. Before giving instances some general notions must be set forth.

Self-analysis reveals always with every thought or act some state of feeling or another. This profoundly affects the consciousness; although its effect may not be explicit or even noticeable until attention is drawn to it. The Germans describe this element of the psyche as *Gefühlston*, feeling tone. If you will think of the time when you "felt good,'' of another time when things felt tiresome, of another time when you felt indifferent, of another when "blue,'' you will have an idea of four variations of feeling tone.

But in human beings "*Gefühlston*'' is always part of a larger consciousness which contains also other sensations, as well as thoughts, ideas and tendencies to act. With each of these becomes associated a particular feeling tone, whether painful, pleasurable or indifferent, more or less.

It is these combinations which form the bases of the *sentiments*, as the French call them, such as love, hate, anger, pride, ambition, benevolence. An *emotion* may be regarded as one of these in ebullition, during which the physical features which condition it are so conspicuous as to be observable to the ordinary eye and sometimes even measurable by instruments of precision. A *sentiment* cannot be observed except by the dynamic reactions which we call psychological; and even then judgment is more or less approximate. But we know it by introspection, and can describe it to one another more or less tolerably, so long as we speak of *usual feelings*.

But nothing is more striking in the practice of a psychopathologist than his frequent meeting with people who mention feelings which language fails to describe. The reason they cannot describe them is that the feelings are entirely new and unparallelled in their experience; so much so that it is common for me to be asked, "Can it be that you have ever had a patient like this before? I am sure that no one can feel like I do."

In essence, the *feeling tones* are merely an evolution from the organic sensations of chemical nature which cause unicellular organisms to be attracted or repulsed in certain environments. Whether we use the term consciousness or not, the lowly organism receives an impression which results in an organic state observable through the movements to which it gives rise. In the same way in human beings, an organic state which we ourselves can from introspection call a state of feeling, may be observed by others only because of the movements or attitudes to which it gives rise. Thus in the melancholic individual, the brow wrinkles, the mouth droops, the shoulders sag, the hands turn inwards, the back stoops, the mobility of both face and body is retarded, speech becomes slow and feeble, while he himself feels miserable and dejected. In the contrary picture, a person feels radiantly happy, his movements are quick and energetic, the expression of the face is laughing and radiant, the speech is voluble, and shows rapid if not coherent thought.

---

[1] A term first used in psychology to denote that which pertains to the feelings.

Now, the one man's happiness does not come from his surroundings, nor is the other's misery caused from without. Each comes from within: it is the *feeling-tone* which is at fault. In the one case, it is excessively pleasurable, and in the other has a painfulness which the patients declare cannot be conceived.

Now, in these cases the state of the feelings is irrespective of the content of the patient's mind; although the patient very often believes quite the contrary and interprets his feelings in terms of his thoughts and surroundings.

But *feeling-tone* can be strongly influenced by surroundings, and by the activities imposed upon the individual. In the first place, the healthy young animal is impelled by a desire for activity in accordance with the physiological law that need or desire creates discomfort, which is the incentive to stimulate movements aimed at satisfying the need. The hungry animal does not sleep, but ranges actively in search of food; the well-fed horse gambols in the pasture to give vent to the energy which it has stored up. A race horse cannot be trained in a stable.

Hence feeling-tone may be made painful by ideas. This may appear anomalous until one remembers that an idea is only the resuscitation of a number of former impressions concatenated into a system. Thus, if any of the impressions which have in the first place composed a particular idea has been a painful one, that whole idea will be imbued with painful *feeling-tone*, and each time the sentiment is felt will be unpleasant in so far as the complexus is dominated by the particular notion which arose during, or was the cause of a disagreeable *feeling-tone* during its earlier occurrences. But if one or more of the other component impressions forming the complexus which we call an idea has occurred during or has been the cause of agreeable *feeling-tone*, the disagreeable one may be not only neutralized but overwhelmed, and the total idea may become quite pleasant. This principle is unconsciously used by skillful pedagogues; and the procedure is most effectively employed in the treatment of the psychoneuroses, sometimes in the reverse direction of endowing with disagreeable *affects* an idea system of pleasant *feeling-tone* which incommodes the patient's life of relation. Sometimes, indeed, these morbid *affects* of pleasant nature may so dominate a patient that he or she is a standing misery even to him or herself, and work and amusement are alike impossible.

Thus a patient of Professor Janet had her life made intolerable by the constant image of a man with whom she was in love. She desired to shake off the recollection, but failed to do so unaided. Professor Janet enabled her to do so, however, by associating with the complexus which formed the image of her discarded lover the face of a pig. This made the whole idea so obnoxious to her that she no longer took pleasure in the obsession, and was enabled to shake it off.

The importance of "feeling-tone;" pathological paradigms. Now, all this may not appear to bear very directly upon the intellectual education of a small boy; but, in reality, it is the key to the whole problem. For if there is a persistency of disagreeable *feeling-tone*, not only is functional capacity at the time much lowered, but nutrition itself suffers. A common illustration of this is the effect of such grief as comes from domestic bereavement. So long as it is permitted to dominate the mind, effective work is not possible; and if the grief is not quickly transcended, emaciation, sallowness and muscular weakness ensue in consequence of the impairment of the functions of the digestive glands. This explanation is not a mere hypothesis, but is confirmed by physiological experiments, which show that it is a biological necessity, and holds for lower animals. It is an endowment of specialization of the nervous system, and is by no means a function peculiar to the human soul, as was formerly maintained. Thus Pawlow by threatening dogs with a whip completely suspended the flow of the gastric juices after eating a meal. And in the contrary sense, he showed that the sight of food without its ingestion was enough to cause the juice to flow. That this was not a simple reflex, he proved by substituting for the sight of food the ringing of a bell or other stimulus which he had taught the dog to associate with feeding time. This caused the *feeling-tone* of pleasant anticipation, and the flow of gastric juice. While in the contrary sense again, it is not at all necessary to actually show a whip to the dog; for any other stimulus can be used to arrest gastric flow, provided it has acquired by association the property of producing disagreeable *feeling-tone.*

The most striking human example of nutritional disorder from a purely psychological cause is that known as the traumatic neurosis, that is to say the nervous depression which occurs in some individuals after the supposed shock of an accident which has not caused serious physical injury. These patients sometimes suffer pitiably; but the whole source of their trouble lies in an idea that they have incurred a shock of such a nature as to inevitably induce grave nervous disorder. The concentration of the mind upon this notion produces so disagreeable a *feeling-tone* that the health is secondarily affected by brooding over it. When this mechanism of the disorder is clearly understood by the physician it is not difficult to cure the patient unless psychotherapeusis is interfered with by unwisely sympathetic friends or venal legal advice.

Another instance of a psychologic origin of impaired function followed by nutritional disorder is afforded by some cases of what is loosely called nervous dyspepsia. Many of these arise merely from a morbid anxiety about what the patients can digest and should eat. This arises in ideas of false nature about themselves and their food. From these ideas arises an unpleasant *feeling-tone,* which amounts to an actual dread. This interferes with the nutritional functions; and hence such people's personal and social efficiency is much impaired.

Such then are the incommoding effects of disagreeable *feeling-tone,* and it will be easy from this principle to deduce the necessity of achieving an agreeable *feeling-tone* if one wishes to make the most of the intellectual capacities of a growing brain.

Suitable studies and prejudicial attitudes of elders. Now, at the first blush, it would not appear that a boy aged four would derive agreeable feeling tones from the study of Greek vocables or anatomical nomenclature and the relations of the bones of the skeleton. These do not look like suitable studies for children of that age; but the intellectual education of John Stuart Mill was begun by the learning of Greek vocabulary, while that of Dr. Sidis's boy was begun by the study of anatomy. The choice was in both cases largely circumstantial, for James Mill was a classical scholar and believed in beginning with the oldest and simplest of the school languages, while the Sidis boy's mother happened to be studying anatomy at the time the little boy's quest for intellectual pabulum had exhausted the casual potentialities of the household. She could without great effort aid his study of the skeleton while the boy played on the floor, while James Mill had no great difficulty, at first, in initiating the study of Greek vocabulary. One hundred years ago the road both to learning and intellectual discipline lay through the classics. Nowadays it is believed that children's needs of the concrete are best satisfied by objective study in the sciences. No doubt this doctrine largely influenced the facilitation of the Sidis boy's studies of anatomy.

The fact that each boy learned with facility at that age proved that the task was agreeable; for it is impossible for more than a short period to maintain the attention of a small boy towards any subject while it remains distasteful. It is true that a subject may be approached with distaste and yet interest may be maintained for a long period; but that is because interest is acquired during the performance of the task. I do not here refer to the extrinsic interest arising from desire of accomplishment of the hope of praise. I mean intrinsic interest in performance. I think that every one here must be familiar with instances where a small child has expressed unwillingness to inaugurate some simple performance which, after beginning, he soon becomes absorbed in and evidently enjoys. A disinclination of this kind may even extend to an organic appetite; and a child may at first refuse a dish which he finishes with gusto as soon as the whim has passed.

Such whims in the intellectual sphere are acquired with great facility from the surroundings. A child is much more observant of little gestures and attitudes than is an adult; for he is not so much dependent upon verbal expression, much of which he has grown up to believe unintelligible. Hence, the slightest indication of approval or distaste by a parent or domestic may arouse a notion in a young child which to the uninitiated observer appears autochthonous. Much of the belief in intuition would be destroyed by an appreciation of this fact. The lesson for us is that our prejudices can hardly fail to be conveyed to our children, however much we may believe them to have been concealed. Now, I venture to say that the vast majority of my readers would have to admit a decided prejudice against teaching either Greek or anatomy to a child of four; and of the remainder I believe that some member of the household could supply any prejudice lacking. Now, disapproval, even if tacit, is quickly sensed by the child; and hence prejudicial ideas are acquired by him with great facility. I may instance the case of a young man to whom a professional career had been closed because of the fact that he had not learned Latin, in spite of serious efforts to do so at school. His inability to do so arose from the notion current in the family that for some reason or another he was not "good at Latin." This became a family tradition, and was made all the more bitter to the boy by the gibes of his elder brother. Fraternal amenities of this kind I have found not infrequently in patients with psychological disorder; and I say nothing of the feminine refinements of torture within the family.

Now, neither John Stuart Mill nor young Sidis had to encounter any such conflict regarding what was fit and proper to learn. Young Mill was carefully guarded from external commentary, and was entirely unconscious of the superiority of his attainments until it was explained to him at the age of twelve by his father. Inevitableness is to the childish mind a comforting character which forbids the anxiety incident to struggle, and hence permits of maximum efficiency. The older political and ecclesiastical systems were well aware of this principle, the forgetting of which is responsible for much of the unrest of our transitional period.

Seizing the favorable moments. As every moment has its feeling-tone, and as in a healthy human being it is impossible for the feeling-tone to be other than agreeable, it follows that there will be some pleasant moments connected with no matter what is given a child to do. The memory of these becomes attached to the idea of the thing done, which thereafter is a pleasant reminiscence. For instance, the pleasant *feeling-tone* which occurs in the process of satisfying youthful hunger is the source of the agreeable reminiscences of the bread that mother used to make, the delicious apples of one's childhood. As a matter of fact, the same bread and the same apples eaten in after life have failed to arouse the same enjoyment; but the idea of them is reminiscent of the old *feeling-tone* connected with the delicious sensation. Another illustration from everyday life is that of the retired business man, in whom the pleasures of youth fail to arouse the agreeable *feeling-tone;* and he has to go back to business in order to find it.

Hence the importance of seizing the moments of agreeable *feeling-tone* upon which to build acquirements useful to the child, rather than to dissipate them in futilities, as is so often done. Do not conclude that this precaution excludes games and sports from a child's life; for as we shall see, there are few activities more useful than these in building up the varied capacities needed for social adjustment; that is when they are used wisely as a means to an end, and not mistaken as an end in themselves. But exactly the same warning is applicable to scholastic study, which is so often mistaken by teachers as an end, or used as the sole means of education, of which they are purely ancillary, as we shall shortly see.

Avoidance of conflicting interests. Although the principle that application to study leads to interest in that study is indisputable, yet the *affect* is very different in either of two contingencies.

First, if there is a frequent intrusion of some conflicting interest, *e. g.*, a series of suggestions tending to create dislike, a taste for the study will not grow, because of the fact that unpleasant *affects* will be associated with study itself on account of its frequent conjunction with periods of frustrated desire. Thus, if in a family, frivolous dissipations are regarded as being the highest enjoyment, it would require more fortitude than belongs to a child to maintain a solitary effort, when counteracted by suggestions from without, even if these are not explicit, that the only real enjoyment is in a type of pleasure which votes all study a bore.

Secondly, when a child is held to a task which is beyond his intellectual grasp, it is not possible that constant failure, especially followed by reproof, will create a pleasant *affect:* hence will follow distaste and a desire to terminate the task: it is the end that will be desired, and not the accomplishment.

The power of an *affective* attitude is most clearly illustrated by such an instance as a small boy allowing himself to be pinched and banged, which he very much dislikes in reality, in order to show that he is impregnable to being hurt. The explanation of this is the desire to be big and strong, and that he believes that the withstanding of pain is a quality of a big, strong boy. As physical prowess is that which has been emphasized before him, it is that which he thinks desirable. When intellectual power receives emphasis in the presence of children, they are very likely to make efforts towards that as an ideal.

A new *affective* attitude changes conduct and activities remarkably. I have under observation a child of eleven who formerly did most of the housework for her widowed mother with such acceptance as to be considered a model girl; but an entire change of disposition towards the housework was caused by an ambition to go to college. The incompatibility that she believed to exist between this desire and her work not only made her refuse housework, but unfitted her for the study by means of which she could hope to go to college, and her anxiety became concentrated upon her promotion alone.

Intellectual Opportunity. But inclination toward a particular kind of activity will bear no fruit unless the child is afforded opportunities for practice. Hundreds of tastes arise temporarily in the life of every child; but their development is frustrated by lack of opportunity to exercise them to the point where they become permanent inclinations.

After all, what is called education is largely the acquisition of co-ordinated activities; for when most people speak of education, what they really mean is acquired dexterity or learning.

Movement and Mind. In order to appreciate the matter of intellectual superiority, it must be understood that there is no essential difference of principle between the training of the co-ordinated acts of the muscles known as skill, and the co-ordinated acts of the mind known as intelligence. Popular language has expressed this truth in the word "expert." Expertness is dexterity, but the word is applied to a man of special knowledge as well as to one of special skill. Thoughts are essentially movements, just as are emotions. The latter, even when signalized by no visible change of position or no visible or measurable redistribution of blood in blush or pallor, fullness or emptiness, are determinable not only introspectively by the subject, but objectively by another observer, thanks to an apparatus which records what is known as the psychogalvanic reaction. Experiments with this instrument led its users, the Swiss Psychiatrists, to infer that it was emotion which created the current which passed through the instrument when the patient's thought was influenced in certain directions. The physical source of the current was for long in doubt, until the researches of Dr. Sidis ascertained that it was due to unconscious movements of the muscles. Hence, muscular movement is a component of emotion. Now, we have as yet no means of physical measurements to prove that thought is a movement; but it is a necessary inference from all analysis of sensori-motor reactions and the storing of their impressions in memory and the conjunction of these into systems of ideas. It would take too long to recapitulate the proof of this.

Inhibition and Will. So let usassume that all thought is the expression of a series of movements neutralized by other mutually inhibitory activities, the counter action of which leads not to a direct muscular movement but to the sentiment of or the explicit expression of what we call "idea." The inhibitions and expressions may be spoken of as volitions; but they are in reality an essential attribute of the thought, will being merely a term to denote some of the tendencies during any given period. Irresolution is merely a conflict between two or more idea systems of which the tendencies counterbalance. Decision is merely a superior energizing of one of these systems by an additional factor added from without or aroused from within. Sometimes it may be effected by the weakening of the dynamism of a conflicting idea system, either through exhaustion of the neurones by physical causes or by subtraction from the total energy of one of the constituent idea or feeling elements by some psychological influence from without.

Acquisition of expertness. But I must leave this fascinating subject to proceed with the pedagogy of expertness of the body, remembering that the principles discussed are strictly applicable to expertness of mind.

In the first place, human dexterity is of exceedingly slow growth as compared with that in an animal, for the possibilities of error are so much greater on account of the enormously greater complexity of the human brain. We know that one reaction from an impression on the nervous system facilitates a second similar reaction, and that by repetition the reaction becomes what we call habitual and very difficult to arrest. In the popular phrase "habit is second nature." A large part of the secret of successful pedagogy inheres in this principle. Both the Sidis boy and young Mill are striking examples of this truth as compared with what is the usual procedure. Even supposing that a child does show an interest in an object which furnishes thoughtful activities, it is very rare for any diligence to be shown by his guardians in forming from what little he acquires spontaneously a bridge to something more. The child himself has neither means nor experience to lead him far beyond the obvious, nor has he wisdom to persevere very long for the sake of something beyond; whereas each piece of information gained and each activity employed should be linked as soon as possible to an acquisition determined by the ostensibly superior wisdom of an elder. This is what was actually done in the cases of Sidis and young Mill. In each case, the child's acquisitions were guided by an intelligence wise enough and painstaking enough not to make the innumerable mistakes which are inflicted upon the child whose supervision is entrusted to servitors without acumen and utterly ignorant of even the first principles of the growth of the mind. Of parents themselves, how many have more than fragmentary and often misguided knowledge of these principles? And after all, the knowledge of the principles is only the first step. From them, fall to be deducted at every moment of the day and in response to every minute act of the child, an innumerable series of adaptations to guide its need in accordance with the correct principles of mental development. Even of professional teachers, how many have clear conceptions of the principles with which they are supposed to deal? Do not the majority at once take refuge in the routine comprised in rules, methods and systems, in which a profound ignorance may be effectively concealed by mystifying phrases of the meaning of which no conception is formed?

But granted that a teacher has acquired a psychological penetration like Colonel Parker, a sympathetic insight like Froebel, an erudition like James Mill, and the biological point of view of our own scientific period, what avails it all for the production of anything like intellectual precocity; for are not the vast majority of children already utterly spoilt intellectually speaking, long before they reach such a teacher?

Would it be possible to train a virtuoso on the violin or other musical instrument were he permitted without guidance to use a violin at an early age, and by doing so to form innumerable bad habits before going to a teacher, say at the age of fourteen? We all know that it would be almost impossible. Apparent instances to the contrary have lived in a musical environment, and have acquired skill by correct imitation, with an occasional correction by a master. These cases are quite comparable to that of the Sidis boy, who acquired knowledge by imitation and occasional guidance by a master; the boy, moreover, was not held to a rigid system as was James Mill's son.

Even the comparatively coarse movements in the work of a professional gymnast cannot be properly learned unless a person is apprenticed as a very young child.

Now it is easier to play at gymnastics or with a musical instrument than with the mind, as Hamlet declared; and yet while we do not for a moment expect great dexterity to be acquired except by the most carefully guided training, and that in early childhood, and would not ever dream of permitting a pupil to utilize his leisure in practicing a method which could only lead to bad habits, yet we do not dream of preventing a child's practice in habits of inattention, untidiness, inaccuracy of observation, errors of fact, want of system, any one of which will seriously vitiate his future mental powers unless it is corrected by future efforts. Even then it can never be completely eradicated, and will remain as a drag upon his later endeavors, besides consuming an enormous amount of energy and time while it is being overcome. The spare energy of the properly guided child goes entirely into the acquisition of mental skill for direct use, and has not to be wasted in self discipline to correct erroneous thoughts and ways.

The learning of speech habits as illustration. This principle is perhaps best shown in the learning of speech; for this is so quickly and easily appreciable by others. Every one knows how difficult it is to correct in after life an unpleasant inflection acquired in youth; and yet with what apparent ease and rapidity does not a child acquire the opportunity of imitating good models, and is assisted by a little guidance at appropriate moments.

Now, articulate speech is only one of the specialized functions comprised among the foundations of intelligence; and it should not be difficult to apply to the intelligence as a whole the data so easily ascertainable by the study of defects of expression in speech.

For instance, what is easier than for a child to pick up undesirable words? How easy it is to eradicate these if the process is begun at the first utterance of the word; but after a few weeks how difficult does it not become.[1] Even in the articulation of words, a wrong use of the muscles is very easy to adjust at the beginning, and becomes more difficult as time goes on. The comfortable doctrine that inconvenient habits and mental inefficiency are appanages of a child, and have nothing to do with his teachers or environment, has very restricted application.

A Pathological example: its cure. For instance, while in Paris, I was asked to see the five-year-old son of a musician who was much concerned by the defective articulation of his boy, which his mother thought was natural and would be out grown. What she meant by natural, I do not know; as no one else in the family had defective speech. After an examination, I concluded that the boy, who was very inattentive and distractable, had been permitted to go on using his infantile manner of articulation, which is often so vague and ill-formed. I believed that re-education could remove the defect, and imposed articulatory exercises to be given by his mother. After two weeks, there was no improvement whatever; but I had sufficient confidence in this diagnosis to request the father himself to sacrifice half an hour of his very busy day for carrying out the exercises, as I had not a high opinion of his wife's intelligence or perseverance. As a result, the boy spoke as well as other children after less than four months of re-education. So much for the facile acceptance of slovenliness and inefficiency as a normal quality of young children.

---

[1] The physical universe supplies us with material where the use of language can be rendered exact. Thus, a fluid is a definite concept clearly appreciated by the senses of a child; a cylinder has an unequivocal shape which the child can appreciate; a pure sound is of measurable pitch. And although hardness and softness are relative, as are heat and cold, each may be measured in terms of some arbitrary standard known to the child. By the neglect of precision in such simple matters as these, parents miss the best occasion for embuing the child with a love of accuracy and order which would go far to minimize his future difficulties and make profitable his studies in school.

The materials for the instruction of thought: concrete physical phenomena. From correct habits of speech, it is only a step to correct habits of thought. The insistent claims of the physical universe upon the understanding of a small child should be satisfied by putting him in the way of gaining accurate knowledge and not, as has been the fashion, by putting him off with fairy tales or intentional deceptions. Instead of distracting his attention, we should maintain it upon such questions. This is the easiest and most obvious matter upon which to train habits of intellectual application, powers of observation, and to begin the study of inference and reason: this is science, the easiest road to education. But that it can be done even apart from objective nature has been shown by James Mill, whose training of his boy was purely literary.

Science or Classics. The instances of young Sidis and Mill contrast completely as regards the subject matter with which they were educated; but they concord perfectly as regards the principles at work. This consideration answers the perpetual controversy as to the relative merits of the classical and modern subjects in education. It is not the subject, but the method (in the deeper sense) which counts. The Latin fathers said "learn much, not many things." Intensity is preferable to diversity, as the success of the Scott shows.

As education is acquisition of habits, it follows that it must be good or bad only in accordance with the place of the acquisition in social esteem. Thus, a thief may be highly educated as such; but his attainment is not regarded as desirable. The ability needed for a successful gambler in stock manipulations might have been of service used in another field.

Such perversions of human intellect would not occur were trainers to act on the principle that human energies must have vent, and to provide opportunity for the exercise of those of the child. Naughtiness is the fault of the parent always. It merely connotes the expression of the child's energies otherwise denied outlet.

The channeling of energies. Hence the channeling of that energy is an important principle to remember. Give him the tools and material, and guide his use of them; then "naughtiness" will be at a minimum. The conjunctions of experiences and materials, the employment of which we call inventiveness, will of course create situations incommoding to those who relate them differently; but such inconveniences should not cause scolding nor repression. The new act should be placed before the child in its true relation to nature and to society, and a lesson gained in this way.

As the tree is bent so will it grow; but be sure that you know which way you are bending. An unsympathetic guidance breeds concealment. Again has psychopathology come to our aid in exhibiting the latent thoughts which guide the lives of misunderstood children. The rectification of such misunderstanding is well shown in the work of juvenile courts, superficial and imperfect as they must needs be.

In a more fine and profound way the book of Eleanor Davids illustrates the facility with which the young tree is re-shaped. She took a boy of five years from an orphan asylum, and in one year taught him truthfulness, accuracy, attention and tidiness, and through self-respect made him into a well-doing little gentleman. He was a quite ordinary child, with no special gifts. Likewise did Fenelon. ....

The Problem. This leads me to the question in which you are most of all interested. Can John Stuart Mill or Sidis be reproduced in any family?

I will say, as did Oliver Wendell Holmes. Yes! if you begin with the grandfather; and here I do not speak altogether of heredity; but of attainment and atmosphere.

Mill and Sidis were possible on account of their fathers' training. Had they been neglected as is the average child, should we have had them?

But to train a child so, one must oneself be trained, Hence the need of a grandfather. Besides, one's whole attitude towards life and its meaning must be rationalistic. It is significant that neither Mill or Sidis were followers of current theological creeds. Each thought for himself. We have the benefit now of their doctrines and experience.

But doctrine must be applied. Rousseau, for example, possessed many of the notions of which we have spoken; but his absorption in his own pursuits left no time for the education of his children, whose neglect by him is a by-word. Again, no one more devout than Fenelon had charge of the education of a boy; and yet the sagacity and wisdom of the young Prince of Bourbon was the admiration of his day, save in some few matters of conduct, in which perhaps he was more sinned against than sinning. It must be remembered that Fenelon had to deal with a Royal Prince who had been utterly spoilt by injudicious adulation of women of the Court. Besides, Fenelon himself had a strong rationalistic tendency, and was a man of strong personal convictions, as the Quietest controversy showed. In addition to this, he was a man of profound psychological insight, as was revealed by some of his letters to the troubled souls who consulted him.

Need of care of the body. A factor in intellectual capacity which too often is left to pure chance is that of a fit body.[1] Its neglect has led to the early death of geniuses like Chopin, Mozart, Keats, etc. In young Mill, the factor was duly secured by the daily walks upon which his father insisted and by the long Sunday outings which were substituted for the attendance at Church, which in those days it was most exceptional to refuse. The Sidis boy, too, has been kept strong and vigorous.

Included in the principles of physical efficiency is that of not working when tired and work is felt to be ungrateful for that reason. It is not possible to cultivate intensity as a habit in intellectual work if there is a constant struggle with fatigue or sluggish action of the neurones, on account of bodily disorder. If it is attempted, one of two things will happen. Either the energies will be utilized by the brain, in which case the nutritive processes will suffer, and the child will grow up either enfeebled or unsound; or else the insistent demands of nutrition will shut out from the brain pabulum and energy it requires for work, and the consequence will be easy-going and slovenly thinking and an incapacity to perform mental operations requiring much effort, a habit which when once acquired can be shaken off only by persevering effort.

Hence, the greatest watchfulness should be exercised in order to ensure a child's attempting the more difficult of his tasks at a time when his energies are at the highest level, and to avoid imposing tasks which require great concentration and effort at a time when the child is jaded or below par. Mere unwillingness or disinclination to apply itself is, however, no criterion of incapacity. Indeed, a wandering of attention is very often an index of superabundant energy. It is at just such a time that a child has the greatest need of the direction and maintenance of his attention in a fixed channel designed by a wise tutor. After a few moments the wandering attention becomes fixed upon the end sought, and a fruitful lesson can be achieved. Each successful attempt to engage attention makes another easier, partly because of the instinctive desire to do again that which was before agreeable, and partly because of the actual interest which the subject of study itself has aroused.

---

[1] During training, proper diet is in most cases essential, and this so in proportion as the functions of animal life are less insistent, as is sometimes the case in an intellectual stock. Stability of mind is hard to obtain when frequently assailed by disordered blood arising from digestive disturbance; and when circulatory energies are diverted to coping with improper or excessive food, good mental work is impossible. For example, there is described in Germany a distinct type of impediment of speech made possible by the excessive amount of meat and eggs consumed by some children; and it is not possible to cure the stammer until the tremendous obstacle of this faulty diet is removed from the patient.

Drudgery. There are always some necessary acquisitions which in themselves have only a faint interest, especially when taught without the child's appreciating their significance. An example in point is the multiplication table. In these cases, perhaps the best incentives, in the absence of interest, are pleasure in accomplishment for its own sake, and the liking for approval. This latter played a large part in the education of young Mill; and the Sidis boy was exceedingly proud of his ability to perform some of his tasks. It is unfortunately too often the case that this sentiment is permitted to usurp the place of interest in the work itself. Every one must know of instances where the desire for prizes or praise robbed study of all meaning. It was a very subsidiary feeling on the part of young Mill; for his father took the greatest care to catechise him, as far as his powers went, regarding the meaning of every thing he learnt.

So called "General" intellectual discipline. I am not contending that intellectual exercise in one sphere necessarily results in general increase of the intellectual power. The now well-known researches of Thorndike and others have disproved that there is any *marked* influence of special forms of training upon more general abilities. For instance, doubling the reasoning power in arithmetic does not double it in grammar, chess, economic history or theories of evolution. Tripling accuracy of movement in finger exercises does not triple it in typewriting, billiards, painting. Courage gained by playing football does not connote an equal gain of courage in tackling intellectual difficulty or facing moral situations.

That there is some gain in these contingencies is contended by Thorndike to be due to the increased efficiency of that function which is common to any two activities compared. For instance, improvement in adding figures improves one's ability to multiply them only because multiplication is in part identical with addition, and because each has in common the same kind of eye movements and focussing the attention upon the relation of the figures. Again, any mental process which exercises by reassociation such facts of experience as length, color, form, etc., will be of value in any other intellectual process demanding the same substrata.

The necessary relationships of subject of study are exceedingly few. Thus, experiment shows that the power of remembering numbers has no necessary relation with that of remembering words. Still more strikingly, it does not even follow that improvement in adding 5, 7, 4, procures the same improvement in adding 4, 5, 7.

Need I then expand the corollary that attentiveness in school work does not necessarily bring attentiveness to business, mechanical or social matters.

There is, however, a factor common to every sustained activity. I refer to the physical basis for prolonged concentration. The tendency towards movement is instinctive. The substitution for this of an ordered activity during which diverse movements are inhibited in order that the energy may concentrate upon a selected series of movements and inhibitions, is very galling at first. It is expressed by fidgeting. Now, this difficulty depends upon distribution of the blood in the body and the state of the secretions. By training, not only is tolerance of discomfort gained; but the digestive, circulatory and nutritional functions become adapted to methods of existence at first repugnant. It is in this way that the concentrated effort required in the intellectual training upon any one subject of study creates a general *habitus* or disposition which makes it more easy to accomplish any other concentration upon intellectual study, and this perhaps quite apart from the actively agreeable *feeling-tones* excited by the more purely intellectual element of study.

It is my belief that the significance of this factor has been scarcely appreciated by Thorndike and his followers; but to the physiologist it is of tremendous importance in explaining the conditions which make for intellectual precocity. But it must be manifest from the earlier part of this paper that *learning to like to think* is of extreme importance in the attainment of the genius known as precocity. Genius itself may be regarded as consisting of the power to maintain at the same time in the mind many impressions and to relate the complexities of these into a generality. It is largely a matter of energy and its direction. It is in its first steps necessarily a capacity for taking pains, as Carlyle said.

Theory and sentiment to conform to a supposed phylogenetic succession. It is to be noted that neither in Mill nor in Sidis was there any conformity to the Spencerian principle, which has become so rife in our day, that a child's activities should develop in the same order as that in which civilized man has progressed. Methods, deduced from this assumption of doctrinaires, have led to alterations of educational curricula nothing less than weird. The doctrine, I believe, is largely based upon a false analogy from the phylogenetic succession shown by the embryo; and I believe it to be in the main misleading; for a modern child of eight, although markedly inferior to the lowest of savages in many fields of accomplishment, may yet far transcend him in others without any detriment to the development of his powers in after life.

The "dynamic" factor in education. But implicit in the doctrine of phylogenetic succession is an important principle of great value. I refer to the dynamic factor of effective education, which Professor O'Shea has so lucidly developed; and he has, moreover, avoided a common error of divorcing manual training from the life interest of a child by giving him uninteresting tasks under the idea that the pedagogue's notions of logical succession as regards complexity best conform to the child's capacity. But they have ignored the *affective* attitude of the child towards his task, which we have found to be so important. Without an end in view, a task is utterably wearisome if often repeated; and in the small child, the end must be immediate in proportion to his poverty of intellect.

Motor Education is a great Teacher of Inhibition. This principle has been adopted and has to an extent already entered scholastic education in America; and I need not enlarge upon its methods, now widely known, save to indicate the pitfalls led to by its erroneous application. It is significant that Mill had no manual training whatever, and later in life somewhat deplored his own want of skill in the use of his hands. But this was more than made up by the control he gained through intellectual drill, in which the motor element is represented by speech and writing. Similarly, the voluntary power and social adaptability of Mill were gained without any of the manual activities which the theory of phylogenetic succession would demand.

It has been too much forgotten by the philosophers of educational theory that the average person does not think as they do. Long practice in generalization and deduction has caused them to divide phenomena after a logical scheme. The average man has not this need. Even "practical business men" selected for their excutive ability are incapable of judgment without concrete presentations. This statement may astonish; but it is a direct quotation from the experience of the director of the largest and most successful organization for scientific research in the world. The statement has been independently made to me also by the director of the scientific researches of one of the arms of the Federal Service.

The real principle at work, then, is not phylogenetic succession; but the exercise of sensori-motor activities in any fashion which will maintain the *affective* attitude of liking by which further activity is stimulated. And as inertia and perversion of taste have each a thousand avenues of approach, intelligent direction of the child's activity towards a clear object is usually essential for the intellectual development which we call precocious.

LITERATURE.

Wandtafeln zur Schulhygiene zum Gebrauch bei Vorlesungen und Vorträgen; 1.05 x 1.44 M von Regierungsrat PROFESSOR DR. LEO BURGERSTEIN, Privatodozenten an der K. K. Universität Wien. Published by the K. K. Schulbücher-Verlag, Wien, 1910. Six charts at 2 K. 10 h. each; or 20 heller per set.

Chart "A." Morbidity, growth in weight and height, study period and sleep.

Chart "B." Influence of season upon resistance to disease and upon growth.

Chart "C." Influence of afternoon sessions on morbidity and voluntary attention.

Chart No. 1, Water Supply; Chart No. 2, Ventilation; Chart No. 3, Heating.

Chart "A." Key of Stockholm investigated morbidity, increase in height and weight, study periods and sleep in the High School pupils of Sweden. He utilized the method of Hertel of Kopenhagen. The data secured came from over eleven thousand pupils. The details of this investigation are here charted by Burgerstein. He shows in figure No. 1, Chart "A," among other things, that the percentage of morbidity increases up to fourteen years of age and then decreases up to seventeen years, and then increases to the end of the high school period. He states that these curves may be accepted as representing not only conditions existing in Sweden but conditions as they exist generally; and that the requirements of school work should take into consideration the natural fluctuations of the resistance of the individual against permanently harmful influences and that special care should be taken in arranging school work to prevent the increase of morbidity during the prepubescent period.

Figure Two Chart "A," shows that the total working period (recitation and study) among the Swedish children investigated by Key is on the average almost seven hours a day for eleven-year-old pupils, and is over eleven hours daily for the pupils in the highest classiical and scientific classes; and that, throughout, the average periods of sleep are more than one hour too short — "nine hours for pupils eleven years old, and seven hours for pupils nineteen years old." These conditions are admitted to be local, but Burgerstein points out the fact that scanty local reports made in other countries lead one to assume that the total day's work is frequently too much and the amount of sleep is frequently too little.

The text under Chart "A" further brings out general additional interesting facts. First, in general the pupils in Key's investigation who worked in excess of the average number of hours daily showed a higher morbidity by 3.2% than those pupils who worked less than the average number of hours. (In Stockholm this difference was 5.2%) Second, the pupils who spent less than the average amount of time in home study included 52.2% of those pupils who had difficulty in keeping up with their classes. The pupils who work overtime appear to be the more capable pupils. The text states that Key found that only those pupils get enough sleep who sit in classes that are considerably lower than the class prescribed for their ages.

The text on Chart "A" contains a bibliography with eight references.

Chart "B." This chart is made up of three parts. (1) A dotted curve represents the admissions by months to five hospitals for children in Vienna for the years from 1898 to 1904, and covers 40,144 cases in total. (2) A heavy lined curve represents the absences by months from school in a small Austrian city. The pupils were between eleven and fifteen years of age.

The curve of morbidity is based on hospital returns for children of both sexes between the ages of 0 and 14 years who came from the poorer classes in a large city. The curve for absences is based on returns from pupils between the ages of eleven and fifteen coming from better homes, and attending boys' schools in a small city. In spite of the variety of conditions concerned both curves show from a hygienic point of view, unfavorable periods of the year for Central Europe. The greatest number of admissions to the children's hospitals and the greatest number of absences from school occurred near the end of the calendar year and during March and April.

(3) The third set of facts presented in Chart "B" refer to the variations in gains in weight in a group of one hundred girls observed by Hanssen. These girls were from six to sixteen years old. They were weighed once each quarter for five years. The results of these observations are plotted on the chart and show that the greatest gains came during July and August, the vacation period, and that the gains decreased from September to June in the school period. These facts are taken to indicate a need for a vacation during the month of December and another in March or April.

Chart "C." Figure One in Chart "C" presents the results of the investigations of Schmidt-Monnard of Halle upon several thousand boys and girls in middle class schools. The figure shows that anemia, habitual headache, nervousness, insomnia, lack of appetite, etc., were more common among children with afternoon sessions than with children with morning sessions. These complaints were generally more common among the girls than among the boys.

Figure Two in Chart "C" illustrates the result of Schuyten's observations in the public schools of Antwerp. These observations were made daily and cover over six hundred children between the ages of seven and fourteen years for a period of two years. They indicate that the percentage of cases showing voluntary attention was greater in the morning sessions than in the afternoon sessions, save in May, June and July. During these months the noon hour is more favorable for recreation and play. Schuyten regards this as an explanation for the increased afternoon attention in May, June and July.

Chart One. This chart deals with the arrangement of wells, arrangements for drinking, details of construction and individual cups.

Chart Two. The figures in this chart illustrate a commercial ventilator; the utilization of windows and doors for ventilation in the school; arrangements for cleaning and filtering the air; ventilation of streams of air directed from natural wind currents by scoops through pipes.

Chart Three. The figures on this chart deal with warm water heating systems, low pressure steam heat systems, and gas heat.

Thomas A. Storey.

Vocaticnal Guidance of Youth, by Meyer Bloomfield. Houghton Mifflin & Co., pp. 124.

This book, with an introduction by Prof. Hanus, is a brief survey of what is being and may be done along this line. Perhaps the most vital question of to-day is how far the work our children turn to is the result of choice, accident or necessity. Society has not realized that successful choice of a life work is not possible to the unadvised and unprepared, and that it is not conserving the talents of the poor or of the majority of its children. This is stated, however, in the Report of the English Royal Commission on Poor Laws and Distress: "We cannot believe that the nation can long persist in ignoring the fact that the unemployed and particularly the underemployed and unemployable are thus being daily created under our eyes out of bright young lives, capable of better things, for whose training we make no provision."

Now evidently adequate training and systematic counselling at the time of leaving school would afford much relief, and in doing this, the need that the public school shall give better training and guidance and that industry shall itself become educational both are forced into prominence. Just as schools must be made more efficient, so must occupations be evaluated, and prevented from abusing and misapplying youth.

The beginning of vocational guidance was made in Boston about three years ago under Prof. Frank Parsons, and in 1909 the School Committee entered into co-operation with his Bureau. After his death Mr. Bloomfield took charge of the work. The Bureau has stimulated or arranged for vocational lectures to graduating classes, has given a Normal Course for teachers wishing to take up the work, keeps a vocational card record of all graduating students, and is making a careful study of opportunities in Boston. The Girls' Trade Education League and the Home and School Association emphasize respectively vocations for girls and the parents' interests, both co-operating with the Vocation Bureau.

The Vocation Bureau puts into the hands of teachers the results of its investigations into vocations for Boston boys, on the basis of which the teachers can more effectively advise the boys.

Brief reference is made to work already done or being done in Germany, Scotland, England, as well as that in progress in New York City.

Such work demands first of all a vocational counsellor, who must have unusual qualifications of tact, persistence and enthusiasm, since he must co-operate at once with the business man, labor union, teacher, parent, pupil, and at times with all the social agencies of the place. Further, he should not only have academic training, but a knowledge of the conditions of industry, preferably at first hand, in his own town. He must have the pupils inspected for mental and physical defects, but at the present stage of mental tests, few or none of them are useful. He must also be able to refer young people to vocational literature. But he must resist the temptation to become an employment agency, must not be prejudiced for or against certain lines of work, must never lose the personal touch. Those types of applicants who seek occult assistance will usually need special treatment, and in all cases applicants will need much assistance in their self analysis, no matter how good their spirit of co-operation. But while such guidance is not a panacea, and has its own dangers, it does point towards the firm establishment of a "life career motive," to a conception of "working life as continuing education," which alone can "appease the God-given hungers of youth."

A cyclopedia of education, edited by Paul Monroe, with the assistance of departmental editors and more than one thousand individual contributors. Vol. 1. N. Y., Macmillan, 1911. 654 p.

This work is the result of the co-operative efforts of several hundred specialists who have contributed the results of their study to the systematizing of educational ideas and practices. A spirit of loyalty to their profession and a scholarly interest in the attempt to give a more definite scientific basis to the work of the teachers have been the dominating motives. No encyclopedia beginning to approach this has ever appeared in English, although similar ones have existed in other languages. The work represents the product of long investigation on the part of most of the contributors and is the outcome of years of special effort on the part of the editors. The character of educational literature is now vast and varied and so are educational ideas and practices. Moreover, education has an increasing importance as the school is coming to be more and more of a social institution and the numerical strength of the teaching profession is being rapidly increased. The publisher's announcement of the last year gives a list of 348 new works on education out of a total of 8,745 new books issued in the United States; in England, the ratio of 587 to 8,446, in Germany, 4,203 to 30,317; in France, 1,005 to 1,805. During this time, the educational periodicals issued in the United States number 150. It is high time that this vast and growing literature be brought together and it is no less than this stupendous task that the editors of this cyclopedia have attempted. We shall hope to print fuller notice of their work later.

L'education commune à Buenos Aires, par PABLO A. PIZZURNO. République Argentine, Extrait du Recensement Général d'Education Levé le 23 Mai, 1909. Ateliers du Bureau Météorologique Argentin, Buenos Ayres, 1910. 87 p.

This report on the public schools of Buenos Ayres shows not only rapid progress in the development of the schools of that city during the last ten years but hopeful signs for the future, for not only are existing defects clearly recognized but suggestions looking towards their removal are made. Many modern pedagogical improvements have already been adopted and still others are under consideration. School attendance is compulsory for six years and there is a six grade course of which pupils are expected under normal conditions to complete one grade a year. Special classes are provided for children who are defective either mentally or physically. The minimum age of entrance is six years though many enter at seven or eight, or even nine years. It has been found that those entering at six years often remain two and sometimes three years in the first grade. In order to remedy this it is proposed to raise the age of entrance to seven years. There is an excellent system of medical inspection, and hygiene occupies a prominent place in the curriculum. The instruction is practical and carried out in the routine of the school. The school session is four hours and physical exercises are a part of the curriculum and occupy a twenty-five minute period, which is placed as nearly as possible in the middle of the session and there is a ten minutes interval after each fifty minute period, which is usually occupied by two classes. Many classes are held in the open air, the climate favoring this arrangement. Playgrounds are provided and supervised by the teachers and a plan for the establishment of school baths is under consideration. A novel and admirable feature which is being introduced as fast as possible, and is already established in a few schools, is a course on the care of infants and young children for the fifth and sixth grades, "that the school may give to the fathers and mothers of the future the necessary training for the most common and urgent needs of life." The present difficulty is the lack of training among the teachers for such a course and the supervisor recommends that in future all teachers for these grades should be given special instruction by a member of the Medical Council of the Schools. Manual training, domestic economy, civic and moral training are all given prominent places in the curriculum and method of teaching closely approximates the German system, mere lesson setting and reciting being absolutely forbidden and the time in class being given to active instruction and interchange of ideas between pupil and teacher. While the same conditions as to the difficulty of securing adquately trained teachers exist in Buenos Ayres as elsewhere, the normal schools which exist are excellently equipped. They are of two classes, one having a four and the other a six years course, to which girls are admitted at fifteen and boys at sixteen years, the former training for the higher positions. A teacher's tenure of office is secure, as long as mental and physical fitness are unimpaired and promotion is based on both ability and term of service. Salaries range from $300 to $160 per month for the nine months of the school year and there is a system of honorary titles and retiring pensions. Teachers retiring after 25 years of service at the age of forty-five, receive

95% of the average of the salary received during the last five years. For those retiring after 17 years of service the pension is calculated by multiplying 3% of the last year's salary by the number of years of service and this same basis holds for those retiring at any time on account of physical disability. A proposition to affiliate the public libraries more closely with the schools in a way to greatly increase the usefulness of both was unanimously adopted by the *Congrès des bibliothèques* held in May, 1910.

THEODATE L. SMITH.

Idealism in education, or first principles in the making of men and women, by HERMAN HARRELL HORNE. N. Y., Macmillan Co., 1910. 83 p.

The problem of education is man-making. The author discusses its relation to heredity, environment, to will, and then takes up the philosophy of man-making. He apparently has almost no knowledge of educational movements outside our own country and it would seem from his references in the various chapters that his reading here has been uniquely restricted. His point of view seems to the writer provincial, narrow and prejudiced. He touches a great many questons but superficially and lightly. Indeed, does not the very sub-title of this book, "First principles in the making of men and women" betray an apprentice's hand?

Auf Deutschlands hohen Schulen, von R. FICK. Hans Ludwig Thilo, Berlin, 1900. 480 p.

This is an illustrated culture history of the German universities with special reference to student life and customs. It abounds in illustrations of ancient modes of hazing, duelling, buildings, excursions, decorations with degrees, tells how students of the Middle Ages lived, studied, dressed, fought, courted, caroused, banqueted, took their exercises, gave concerts, etc. Many of the illustrations are of academic buildings and the work ends with an excellent bibliography.

Problems of the elementary school, by ARTHUR C. PERRY, JR. D. Appleton & Co., N. Y., 1910. 224 p.

The problems of organization are the organic structure, curriculum and moral teaching. Problems in method and management are English in the upper grades, history, facts and devices in arithmetic, blackboard, school, museum, alumni, the adolescent girl. The fullest treatment is that given to arithmetic. I cannot, however, feel that the author has shed a great deal of new light upon the subject.

Class teaching and management, by WILLIAM ESTABROOK CHANCELLOR. Harper & Brothers, N. Y., 1910. 343 p.

The writer first discusses the learning and teaching process; development teaching; the teacher as interpreter of the course of study; the day's work and plan; class control; classifying, marking, grading, promoting; how to make a good school and class; the class teacher and industrial arts; the teacher's own life in an age of educational expansion.

A text book in the principles of education, by ERNEST NORTON HENDERSON. N. Y., Macmillian, 1910. 593 p.

In the first part the author treats of education as a factor in organic and social evolution, dealing with readjustments in meanings, conceptions, methods, discussing the relation between education, heredity and society. The second part is devoted to progress of education in the individual, touching individual development generally, recapitulation, trial and error, conscious learning, training of the reason, formal discipline, imitation, language and play. Part three is devoted to educational agencies, dealing with evolution of the school, its function, the academic and practical, liberal and vocational ideas.

Some aspects of modern education, compiled by R. D. Patel. Surat, India, I. P. Mission Press, 1910. 148 p.

This is an interesting collection of opinions on various educational topics from those dealing with the elementary school to the university that are thought vital in present conditions of education in India. There is special interest in the chapters on the moral and the religious crisis, which seems to be a grave one in this country at present. The problem of literature in the competition between that which is indigenous and English literature are unique.

Principles and methods of university reform. Report of the Hebdomadal Council. Oxford, Clarendon Press, 1910. 98 p.

This valuable report covers the following points: the constitution of university, faculty with draught statute, compulsory Greek, entrance examinations, admission of poor students, finance, scholarships, exhibitions, fellowships, curriculum for business careers, and the length of the academic course. As a whole the report marks the high water mark of British university reform.

Educational aims and efforts, 1880-1910. By SIR PHILIP MAGNUS. New York, Longmans, Green, 1910. 288 p.

This English veteran here prints many of his addresses on secondary, university and technical education.

Proceedings of the Child Conference for Research and Welfare, 1910. Held at Clark University, Worcester, Mass., June 8-July 2, 1910. New York, G. E. Stechert & Co., 1910. 287 p.

Clark University here prints the proceedings of its second Child Conference for Research and Welfare, a five days' session, with thirty-five addresses by nearly as many different experts on such topics as home education, the children's clinic at Clark, the play life of girls, application of psychology to the child welfare institutions, duty of the community to the neglected child, child nurture in Catholic schools, the problems of the reform school, industrial insurance and its relations to child welfare, the motion picture, birth registration and the prevention of infant mortality, European suggestions in school hygiene, the discipline of work, the child labor committee, the proposed national children's bureau, the tuberculous child, open air schools, eugenics and venereal diseases, improving the race, the hook worm disease among children, the probation system, parental responsibility, and defective and delinquent childhood, children and birds, school gardens, the Worcester conference, a comprehensive plan for child welfare, vital statistics.

Open air crusaders. A report of the Elizabeth McCormick open air school together with a general account of open air school work in Chicago and a chapter on school ventilation. Edited by Sherman C. Kingsly. Chicago, 51 La Salle St., United Charities of Chicago, 1910. 107 p.

This is by far the best book up to date known to the writer on open air schools. It has chapters by different writers on history, details of management, statistics, comments, the open school window, ventilation, etc., with half a dozen charts and more than a score of illustrations, and an excellent bibliography at the end. One of the best tables shows the methods and results of open air schools in eight American cities.

The modern child, compiled by Hervey Elwes Foulis, London, 1908. 246 p.

This little volume is a selection of extracts, rather more prose than poetry, from various modern authors, several score in number, about the child. They are grouped under the general captions: childhood, parents, babies, the nursery people, naughtiness, frightening things, little girls, boys, grown-ups, lessons, out-of-doors, little invalids, seaside children, religion, entertainments, London, children's books, Christmas, lost awhile. The selections seem admirable. The compiler is evidently a very discriminating lover of childhood.

Psychologie de l'enfant et pédagogie experimentale, by ED. CLAPAREDE. Fourth edition. Geneva, 1911. pp. 453.

The first chapter contains a thirty page summary with bibliography, of the development of experimental pedagogy in Europe and this country, which is necessarily rather incomplete. Then follow equally brief chapters on problems and methods, 150 pages on the general topic of mental development, and 160 on intellectual fatigue. With this distribution of space the treatment is one sided and leaves the reader with scarcely a glimpse at some of the important phases of the subject.

The health index of children, by ERNEST BRYANT HOAG. San Francisco, Whitaker & Ray-Wiggin Co., 1910. 188 p.

The writer, who has been a medical officer in the Berkeley, Cal., schools for years, here summarizes his experience so that it will be easily accessible to teachers and parents. He gives tables of the symptoms of the common diseases, succinct statements of the importance of treating adenoids, bad teeth, eyes, ears, etc., common nervous troubles, bad posture, defects in the feet, and so on. He also describes the office system used in Berkeley with the various blanks, and the leaflets which are sent out to parents to instruct them as to the common symptoms of disease. At the end are brief bibliographies.

The book does not assume to be a complete account of the subject, but is very well adapted for its purpose as a handbook for the teacher to use daily in the schoolroom. It will greatly facilitate her work and make it easier to introduce medical inspection in small places where medical officers must be few and poorly paid. AMY E. TANNER.

First measures needed for child welfare upon the part of municipal and educational authorities in the South, by DAVID SPENCE HILL. Southern Medical Jour., Jan., 1911. pp. 99-104.

In this address, delivered before the joint meeting of the Southern Society for Philosophy and Psychology and the Child Study Department of the Southern Educational Association, Dr. Hill calls attention to the great need of arousing public interest in child welfare. In addition to making use of the daily press and political strategy, he urges compulsory medical inspection of all school children and schoolhouses and the establishment of a children's bureau as a part of the State Board of Education.

Colonies de vacances et oevures du grand air en France et a l'étranger, par EUGÈNE PLANTET et ARTHUR DELPY. Paris, Hachette, 1910. 510 p.

This is the most comprehensive treatise on vacation colonies that has yet appeared. It is confined mainly to France but gives some account of every important movement in this direction throughout the entire republic. This seems to indicate that France is far in advance of all other countries in this respect.

The guild of play book of festival and dance, by G. T. KIMMINS. Dances arranged by M. H. Woolnoth. Part 2. London, J. Curwen & Sons, 1909. 57 p.

The guild of play book of national dances, by G. T. KIMMINS. Dances arranged by M. H. Woolnoth. Part 3. London, J. Curwen & Sons, 1910. 82 p.

In these guild of play books, of which now three have been published, the effort is made to develop a system of practical study of national dances and songs, very often with words, which shall be acted or danced out with specific directions for every measure. One volume is a book of dances suitable for pageants. The design is to bring out the child's inheritance from his remote ancestry so that all parts of the soul and body shall be exercised. The dances are designed chiefly for out of doors and with their copious illustrations, these books make very entertaining reading

Applied ideals in work with boys, by C. WARD CRAMPTON, WINFIELD S. HALL, G. WALTER FISKE, EDGAR M. ROBINSON, THEODORE G. SOARES, WALTER M. WOOD, ERNEST THOMPSON SETON, M. D. CRACKEL, GEORGE S. ADDAMS, E. E. BOHNER, CHARLES R. TOWSON. Y. M. C. A. Press, N. Y., 1910. 256 p.

This little work treats of physiological grouping, adolescent psychology, self-government, sex instruction, altruism, boys' religion, Bible made real, the outrage in the community, the boy scouts, summer activities, helping unfortunate boys, the boy of foreign parentage and the employer of boys.

The problem of the crippled school child. An account of the treatment of crippled school-children in a residential school. By E. D. TELFORD. London, Sherratt & Hughes, 1910. 32 p.

This is a practical pamphlet dealing with the aim of the residential school for crippled children, choice of cases, residential school, the Swinton home school, cost, results, dietary, income and expenditure. It describes a progressive institution.

The baby, by DANIEL ROLLINS BROWN. Boston, Whitcomb & Barrows, 1908. 200 p.

This is an attractive compend treating the period of infancy, the new born babe, the elements of food and digestion, lactation, substitute food and feeding, wet nurses, weaning, the second year, premature infants, sleep, clothing, exercise, bathing, teething, disease, infantile ailments, pregnancy and convalescence from childbirth.

Kinderarbeit und Kinderschutz in der Schweiz, von PH. ZINSLI. SCHEIFLIN. Spring et Cie. Bern. 17 p.

This, as its title indicates, is a succinct statement of what is done for children, especially the delinquent, defective and dependent classes of the various cities of Switzerland which, be it remarked, is among the foremost countries in this work.

The diseases of infancy and childhood; designed for the use of students and practitioners of medicine, by HENRY K. POLIK. 3d ed., rev. and enl. N. Y., Lea & Febiger. 1910. 944 p.

The third edition of a very valuable and favorably known work, revised to date, with new matter and considerable reconstruction.

Plain facts on sex hygiene, by WILLIAM LEE HOWARD. Edward J. Clode, N. Y., 1910. 171 p.

The chapter heads are: conditions that menace homes and children, what are these diseases; how are they contracted by the innocent; syphilis, its contagiousness and danger to youth; hereditary syphilis; the ghosts of syphilis; mental and nervous troubles appearing late in life; syphilis in relation to marriage; the mental and physical value of continence. The author writes with his usual clear and incisive style.

The strength of being clean; a study of the quest for unearned happiness. By DAVID STARR JORDAN. Boston, American Unitarian Association, n. d. 45 p.

This is a Red Cross address, in which this versatile and always suggestive author gives us his ideas on indolence, gambling, licentiousness, precocity, profanity, intemperance, and the joy of life generally. Emotional excess, he says quoting Miss Call, is woman's form of drunkenness, and nervous prostration is her delirium tremens. Sham emotions, whether they be of love, religion or liquor, are sensuous. Civilization has been called a disease of the nerves. Its methods in the hands of the incompetent are edged tools handled by fools.

The dawn of character. A study of child life. By EDITH E. READ MUMFORD. London, Longmans, Green & Co., 1910. 225 p.

The author seeks to interpret the child's experiences from its own point of view, pleads for a closer study of child life, describes the contents of the child's mind and its growth, together with that of the imagination, emphasizes habit, the will and its development and training, the place of punishment, takes the case of law versus freedom, stresses children's curiosity and the dawn of religion, points out how many different types of childhood there are, and on this basis seeks to draw certain conclusions that will shed light on the child's point of view. As a whole the book is well meant and timely. The author is evidently tactful and observant but there is no indication that she is even aware of the existence of the scores and hundreds of special studies touching nearly every essential point that she treats. To our knowledge of paidology the book, therefore, adds nothing whatever but it no doubt has a place and will do good.

The essentials of character. A practical study of the aim of moral education, by EDWARD O. SISSON. New York, Macmillan, 1910. 214 p.

This book is written in the belief that a clear comprehension of what really makes up human character would be one of the first and best aids to the actual worker. The author first considers natural tendencies, then how to treat them, and discusses in the later chapters disposition, habits, tastes, personal ideals, conscience, social ideals, strength of character, religion, and cultivation of character.

Wider use of the school plant, by CLARENCE ARTHUR PERRY. New York, Charities Publication Committee, 1910. 423 p.

These pages contain the results of an inquiry into the use of the school after school hours, the information being gathered from the reports both of school authorities and voluntary organizations as well as by personal investigations. The various after school and evening activities are rapidly increasing. The school belongs to the people and it should be open to all their legitimate social activities, even though this large use requires an increase of the staff. The writer sums up his observations under evening classes, vacation schools, playgrounds, public lectures and entertainments, evening recreation centres, social centres, games and dancing, meetings in the schoolhouses, social betterment, lecture courses, etc. The illustrations show what is now being done at various places and are of great interest. This movement is obviously so wholesome that about the first question that arises in the minds of those who peruse it is "Why in the world did we not think of doing these things before this year of our Lord 1911?"

Norwich; a social study, by C. B. HAWKINS, with an introduction by the Dean of Norwich. London, Philip Lee Warner, 1910. 326 p.

This is a study of a boot trade English town such as ought to be made of every industrial community. The writer considers the provisions for the sick, charities, boy labor, the unemployed, rating and poor law authority, local government and public service, glancing at the other industries of the town such as food and drink, conveyance, engineering and metals, printing and lithography, cabinet making, silk, hair and brush making, laundries and charwomen, etc. The work is illustrated by many cuts, diagrams and tables which make an interesting and suggestive basis for work looking towards practical reforms.

The Journal of Race Development. January, 1911. Vol. 1, No. 3. Clark University, Worcester, Mass.

This third number contains articles by experts on "The Dynamic Factors in the Liberian Situation," "Is Liberia Worth Saving?" "The Probable Influence of the Turkish Revolution on the Faith of Islam," "Personal Experience in Turkish Massacres," "American Education in the Turkish Empire," "Autonomous Government for Porto Rico," "The Indian National Congress," "The Development of Racial Character," with a section of notes and reviews. The editor, Professor Blakeslee, of Clark University, has spared no pains to gather the best testimonies on the subjects treated and here prints some of the addresses at his conference held at Clark University last summer.

The Jews: a study of race and environment, by MAURICE FISHBERG. London, Walter Scott Publishing Co., Ltd., 1911. 578 p.

This is a compend with a few score illustrations and plenty of references and treats of the Jews from a historical, ethnical, demographic, pathological and sociological point of view, with concluding chapters on occupations, criminality, physical conditions, social disabilities, and Zionism.

A voice from the Congo, comprising stories, anecdotes, and descriptive notes, by HERBERT WARD. N. Y., Scribner, 1910. 330 p.

This writer went to Africa not he says, from any high motive, but "simply and solely to gratify my love of adventure." He here prints his notes of travel, village scenes, an elephant hunt, the monkey people, Tippoo Tib, something about the slaver, animals, oddities, romance, etc.

A guide to reading in social ethics and allied subjects. Lists of books and articles selected and described for the use of general readers by teachers in Harvard University. Cambridge, Published by Harvard University, 1910. 125 p.

This is a bibliography of unusual interest in which perhaps a couple of dozen Harvard teachers have given the titles of works that have helped themselves most and which they believe would help others on such topics as social philosophy, institutions, service, the ethics of modern industry, social aspects of religion, and social ethics.

The marvels beyond science, by JOSEPH GRASSET. Funk & Wagnalls, N. Y., 1910. 87 p.

Part one is devoted to definitions, historical account and difficulties in making the survey. Part two describes the occultism of yesterday such as animal magnetism, hypnotism, the theory of the unconscious, polygonal memories, crystal gazing, unique associations of ideas. Part three is the occultism of to-day. In this he treats of psychological radiations, the astral body, etc.

The age of mammals in Europe, Asia and North America, by HENRY FAIRFIELD OSBORN. The Macmillan Co., N. Y., 1910. 635 p.

This work is written in the spirit of Huxley, to whom it is dedicated, and the author emulates his gift of speaking to the learned and the unlearned at the same time. The author's investigations extend over many years and over a wide range of both territory and of topics, and he has here gathered together the general results of his studies under the main heads of introduction, the Eocene, the Oligocene, the Miocene, the Pliocene, the Pleistocene, each with various subsections and chapters. In their present form, these are the Harris Lectures given at the Northwestern University. The book is well equipped with references, illustrations and a good index and is a very valuable contribution to its subject.

Fairy tales of all nations. Famous stories from the English, German, French, Italian, Arabic, Russian, Swedish, Danish, Norwegian, Bohemian, Japanese, and other sources. Translated and edited by Logan Marshall. Philadelphia, John C. Winston Co., 1910. 314 p.

We have here between two and three dozen of the most noted fairy tales gathered from the folk lore of more than half as many different places, each with one or more illustrations. The stories are well told and the illustrations, which are colored, are well selected.

Industrial studies. United States. By NELLIE B. ALLEN. Boston, Ginn, 1910. 335 p.

The chief topics are surface drainage, climate, soil, waterways, railroads, cotton, sugar, fruit, wheat, corn, coal, iron, gold, silver, beef, sheep, wool, lumber and fishing. The work is copiously illustrated.

Elementary chemistry, by HOLLIS GODFREY. New York, Longmans, Green, 1909. 456 p.

The ideas that have governed the author of this book are simplicity and arousement of realization that the science of daily life is identical with that of the classroom and to include the essential facts assimilated in one year's work. Stress has been given on the proper sequence so that a pupil may have a clear uninterrupted progression of thought from the beginning to the end of each chapter.

Elements of business arithmetic, by ANSON H. BIGELOW and W. A. ARNOLD. New York, Macmillan, 1911. 258 p.

This arithmetic was undertaken in the belief that in this topic should be taught the methods most in vogue in the business world and in such a way as to form correct habits by those who are to attack the problems of real life. Thus business methods had first to be investigated and then the whole subject written up from the viewpoint of habit forming after the methods had received the sanction of industrial leaders. The processes here are strictly arithmetical without the abstractions of algebra and geometry, which immature young people do not comprehend. It is on the whole a stirring and very stimulating new departure.

What's wrong with the world, by GILBERT K. CHESTERTON. Dodd, Mead & Co., N. Y., 1910. 367 p.

The trouble with the world is that very many men are homeless literally and metaphorically. True domesticity means rest for the very soul. The next trouble with the world is imperialism. Then follow feminism, education or mistakes about the child.

Woman and the republic, by HELEN KENDRICK JOHNSON. Pub. by the National League for the Civic Education of Women. N. Y., 1909. 359 p.

This is a survey of the woman suffrage movement in the United States and a discussion of the claims and arguments of its foremost advocates. The author's conclusion is that "the movement to obtain the elective franchise for woman is not in harmony with those through whom woman and government have made progress." "The suffrage movement strikes a blow squarely at the home and the marriage relation." The general conclusion of the work is "that woman's relation to the republic is as important as man's."

Tales come true and tales made new, by MARGARET COULSON WALKER. N. Y., Baker and Taylor Co., 1910. 148 p.

This author encourages children to make things out of apples, potatoes, flowers, pumpkins, turnips, radishes, etc., and in this way by very clever utilization of common articles of furniture, many animals and quaint human characters are represented, fifty-three in all, so that the book is on the whole a rather clever bit of ingenuity on the part of an adult although children alone would never think of doing such things.

Old age deferred. The causes of old age and its postponement by hygienic and therapeutic measures. By ARNOLD LORAND. Second edition. Trans., with additions, by the author from the third German edition. Phila., F. A. Davis Co., 1911. 472 p.

Although old age is a chronic illness, its symptoms can to a great extent be alleviated and thus permit the complicated human machinery to wear out smoothly. The work describes in simple language how overstrain of the various organs can be avoided. The writer describes the agencies that govern the condition of the nerves, the sexual system, how probable duration of life can be determined, the causes of old age, its premature construction and elimination of toxic products, the hygiene of the thyroid gland, liver, intestines, kidneys, skin, rational clothing, cold feet, sunlight and open air, artificial hearing, etc.

Classic myths in English literature and in art, based originally on Bulfinch's "Age of Fable" (1855), accompanied by an interpretative and illustrative commentary, by CHARLES MILLS GAYLEY. New edition revised and enlarged. Boston, Ginn. (1911.) 597 p.

This is a new edition of proven excellence in 32 chapters on Greek myths, myths of creation, gods of heaven, earth, the under world, waters, Roman divinities, the greater and lesser deities, Aeolis, Minos, Cecrops, Daedalus, the Trojan war, Ulysses, Eneas, Norse gods, Niebelung; with a second part dealing with the history of myth, its origin, distribution, preservation. The book is illustrated by nearly 200 well chosen cuts.

The labour exchange in relation to boy and girl labour, by FREDERICK KEELING. London, P. S. King & Son, 1910. 76 p.

This very valuable and interesting book treats of childrens labour exchanges, proposals and experiments in England and Scotland, Germany, experiments with conclusions and working out of the scheme and a bibliography.

What a father should tell his little boy, by ISABELLE THOMPSON SMART. N. Y., Bodmer Co. (1911.) 116 p.

What a father should tell his son, by ISABELLE THOMPSON SMART. N. Y., Bodmer Co. (1911.) 103 p.

What a mother should tell her little girl, by ISABELLE THOMPSON SMART. N. Y., Bodmer Co. (1911.) 105 p.

What a mother should tell her daughter, by ISABELLE THOMPSON SMART. N. Y., Bodmer Co. (1911.) 113 .p.

These volumes are attractive in form and have the merit of distinguishing between what little children and older ones need to know. They are, however, we think, too sentimental and also too diffuse. Still they tell the facts. This, however, we think is much better done for girls than for boys.

Public schools for girls. A series of papers on their history, aims and schemes of study, by members of the Association of Head Mistresses. Edited by Sara A. Burstall and M. A. Douglas. London, Longmans, Green & Co., 1911. 302 p.

This book is made up of 24 chapters by as many different authors on rise and development of public secondary schools for girls, junior school work, divinity, English, geography, history, modern languages, classics, mathematics, natural science, home arts and sciences, drawing, music; language work, gardening, physical training, hygiene and comfort, medical inspection, resident schools and boarding schools, examinations, etc.

The training of teachers for secondary schools in Germany and the United States, by JOHN FRANKLIN BROWN. N. Y., MacMillan, 1911. 335 p.

The writer first describes the training of German teachers, their classification, institutions, the seminary, opinion and practice, standing and impressions. The second part, beginning with page 207, is devoted to training of American teachers, classification, institutions, responsibility, standard, plan for providing the desired training.

The adolescent, by J. W. SLAUGHTER; with an introduction by J. J. Findlay. London, Swan Sonnenschein & Co., 1911. 100 p.

The author here has attempted to epitomize in brief form and in lucid language the practical result of Dr. G. S. Hall's work on Adolescence to which the author says he hopes his book will serve as an introduction and lead to its careful and extended study. Its ten chapters are: a general survey, growth and physiological changes, normal development of instincts and emotions, adolescent love, scepticism and storm and stress, unification or the philosophical psychosis, pathology and hygiene, juvenile crime and its treatment, education of boys and of girls during adolescence.

Vocational education, by JOHN M. GILLETTE. N. Y., American Book Co. (1910). 303 p.

This interesting and timely book is divided into three parts. Part I treats the educational renaissance, the vocational movement and interests, accomplished results, reactions on education in the school; Part II, the social demands of education, society and the individual, democracy and its imperatives, the importance of the economic interest in society and its significance for education, philosophical demands, social end, state education; Part III treats of the methods of socialization, its criterion and its place in the programme of studies and also of subjects and the last chapter contains some specialized programmes.

The teaching of agriculture in the high school, by GARLAND ARMOR BRICKER. N. Y., Macmillan, 1911. 202 p.

This is a valuable, timely and greatly needed book. The schools garden movement has spread over the country, but in general, the interest here excited stops at the high school. There are, however, various schools where this is not the case and it is these this author describes in the second chapter. The author thinks that secondary agriculture should be taught as a separate science. He gives physiological and psychological determinants of sequence, organization of the course, method of presentation organization of laboratory and field work, an illustrative list of classified exercises also education aims, values and ideas. The book has a few well chosen sample exercises.

The American newspaper, by JAMES EDWARDS ROGERS. Chicago, University of Chicago Press 1909. 213 p.

This deals with the historical evolution of the modern newspaper, its relation to the city, its nature, its influence, and the cause for the psychological and economic interpretation.

Medicine and the church, being a series of studies on the relationship between the practice of medicine and the church's ministry to the sick, by SIR CLIFFORD ALBUTT, A. W. ROBINSON and others. Edited with an introduction by Geoffrey Rhodes. With a foreword by the Lord Bishop of Winchester. London, Kegan Paul, Trench, Trübner & Co., 1910. 298 p.

Here we have an interesting book by twelve writers of eminence introduced by a Lord Bishop. The topics and viewpoint are naturally different. The topics treated by the various authors are the metaphysics of Christian Science, prayer and mental healing, the Eucharist and bodily well-being, the church and mental healing, our Lord's attitude toward sickness, faith and mental instability, the relation of priest and doctor to the patient, medicine and religion.

Report to the Board of Estimate and Appointment of the City of New York by the Commission on Teachers' Salaries. October 17, 1910. 143 p.

This stirring phamphlet is the result of a careful survey which shows present conditions and makes recommendations concerning such topics as undesirable multiplicity of salary schedules, salary increase, cost of living, its relation to efficiency, the bonus system, interrelations of sex, work and pay, need of men teachers, equal pay for equal work principle.

A little fifer's war diary, by C. W. BARDEEN. Syracuse, N. Y., 1910. 329. p.

This contains 17 maps, 60 portraits, and 246 other illustrations. It is an extremely concrete and interesting narrative of a member of Company D in the first Massachusetts infantry. It is pervaded by quick wit and keen humor and the author has a quick sense of shams and pretense. It might be considered a peace document, for interesting as it is it brings out in a startling way the horrors of war.

The personal equation, by LAWRENCE MCTURNAN, with an introduction by James L. Hughes. N. Y., Moffat, Yard & Co., 1910. 248 p.

This work is not scientific, nor is the personal equation that which astronomers know. The writer treats of the great lives of great teachers, workaday heroes, biography of youth and age, great women, the human side of heroes, controversies of adversity, books as teachers.

Artistic homes, by MABEL TUKE PRIESTMAN. Chicago, A. C. McClurg & Co., 1910. 148 p.

The contents embrace chapters upon a colonial home in Germantown, a barn that found itself, a house cleverly planned with built-in furniture, and describes other unique homes by the sea and in the mountains, suburbs, country, in English style, the old farmhouse, the house made over from a stable, a relic of the past, suggestions from a Jersey bungalow, commonplace city houses made attractive. The book is copiously illustrated.

Observations d'un musicien Américain, par LOUIS LOMBARD. Tr. par Raoul de Lagenardière. Paris, Louis Theuveny, 1905. 198 p.

This book contains aphorisms on a great number of topics, music and dance of different people in Europe, the timbre of the voice, many composers, use and abuse of the piano, the commercial value of violins, lyric theatre, conservatories, etc.

A rapid survey of the Massachusetts Educational System, by CHARLES A. HARRIS. Copyright, 1910, by Charles A. Harris. (Publisher not given). 100 p.

This little historical sketch is excellently prepared and should be a convenient manual for its purpose. We can but wish, however, the author paid a little more attention to bibliography.

Plutarch on education. Embracing the three treatises: The education of boys; How a young man should hear lectures on poetry; The right way to hear. By CHARLES WILLIAM SUPER. Syracuse, N. Y., Bardeen, 1910. 192 p.

Macaulay's essays on Clive and Hastings. Edited with introduction and notes by Charles Robert Gaston. Boston, Ginn, 1910. 268 p.

Rosalynde, or Euphues golden legacy, by THOMAS LODGE. Edited with introduction and notes by Edward Chauncey Baldwin. Boston, Ginn, 1910. 131 p.

Lowell's The vision of Sir Launfal, and selected poems. Edited with notes and introduction by Allan Abbott. N. Y., Longmans, Green, 1910. 78 p.

Thomas Gray's Elegy written in a country churchyard and other poems. *Oliver Goldsmith's The deserted village, The traveller,* and other poems. Edited with notes and introduction by James F. Hosic. N. Y., Longmans, Green, 1910. 80 p.

Huxley's Autobiography and selected essays from Lay Sermons, edited with notes and introduction by E. H. Kemper McComb. New York, Longmans, Green, 1910. 186 p.

Fourth Biennial report of the State Board of Charities and Corrections of the State of California, from July 1, 1908, to June 30, 1910. Sacramento, W. W. Shannon, 1910. 202 p.

Massachusetts Historical Society. Proceedings, October, 1909-June, 1910. Vol. 43. Boston, Published by the society. 1910. 724 p.

Les methodés de la raison, précédées d'un exposé complet du travail cérébral, par P. FROUMENT. Paris, Vigor Fréres, 1908. 106 p.

New-world speller. Grades one and two. By JULIA HELEN WOLFARTH and LILLIAN EMILY ROGERS. Yonkers-on-Hudson, New York, World Book Co., 1910. 94 p.

Schulpsychologie Unterrichts-und Erziehungslehre, von SCHULRAT RZESNIKEK. Durrschen Buchhandlung, Leipzig, 1910. 254 p.

From passion to peace, or The pathway of the pure, by JAMES ALLEN. New York, Crowell, 1910, 53 p.

Kurzsichtigkeit und Schule, von HUBERT H. WINGERATH. Leopold Voss, Leipzig, 1910. 127 p.

Universities and national life, by THE RIGHT HON. R. B. HALDANE. London, John Murray, 1910. 110 p.

These three lectures are entitled: the soul of the people, the calling of the preacher, and the dedicated life.

Two Russian reformers, by J. S. T. LLOYD. London, Stanley Paul & Co., 1910. 335 p.

These two reformers are Ivan Turgeney to whom the first 200 pages are devoted and Leo Tolstoy who claims the rest.

Church work with boys, by WILLIAM BYRON FORBUSH. Boston, The Pilgrim Press. (1910.) 105 p.

State commission in lunacy. Twenty-first annual report. State of New York. No. 35. 1910. 440 p.

NOTES.

(From The Eugenics Review, Feb., 1911, Vol. 2, pp. 319-321.)

We are indebted to Monsieur Michel Huber, Statistician to the *Statistique Générale* of France, and a member of the French Ministry of Labour, for the following laws and regulations relating to maternity assistance, which have been enacted in France.

Law of November 27th, 1909, Guaranteeing to women in child-bed their work or employment.

The only clause: Absence from work on the part of a woman for eight weeks consecutively before and after child-birth does not allow her employer to break his contract with her for her services except under a penalty of damages with interest payable to the woman.

The woman must give her employer due notice of the cause of her absence.

Any private agreement to the contrary is void in law.

The woman may claim legal assistance in case of need in a law court of the first degree.

Law of March 15th, 1910, Granting absence from duty with allowances to school teachers in child-bed.

Clause 1. Absence for two months with full salary, independent of leave of absence for illness as set forth in the decree of November 9th, 1853, is to be allowed to school mistresses, half before and half after the birth of a child.

No schoolmistress may return to work till after a medical examination and a certificate that she may do so without injury to her health; otherwise extended leave of absence is to be granted her on the same terms as before, till two months have elapsed.

State aid to Associations for Maternity Assistance. Budget of 1910. Ministry of the Interior.

Cap. 37. Grants to associations for maternity assistance and the protection of young infants, 500,000 frs. = £20,000.

This grant is to provide State aid, in proportion to their efforts and to the results shown, to such associations for maternity assistance as afford pecuniary help to enable women to rest before and after child-birth.

Ministry of Labour. Statistique Générale de la France.

Every workman receives at marriage a gift of 100 francs.

Married workmen receive a gift of 100 francs each at the birth of a child. The mother, if she is in work or in service, has a right to six weeks' holiday on full pay.

Every workman who has more than three children on his hands under the age of 16 receives the sum of 100 francs per annum for each child after the third.

Circular Issued by the Minister of War, April 29th, 910. Prizes for women who suckle their children and who work in the shops of the War department.

Workwomen suckling their own children will be paid at the end of each four months after the date of birth a premium of 10 francs.

In the case of twins the premium will be raised to 10 francs per month for each child, if both are suckled by the mother.

Grants to families. Given since January 1st, 1910.

The City of Paris gives to all workmen and others employed by the municipality who are the fathers of at least four children under the age of 13, 50 francs per annum in respect of each living child after the fourth who is under that age, provided that such fathers' yearly salaries do not amount to 400 francs (£16) inclusive of bonuses and extra pay, and that they are the sole support of their families respectively.

The Department of the Seine gives 50 francs per annum to all workmen who have at least four children on their hands.

The Municipal Council of Paris.—It was proposed by M. A. Rendu. with regard to reorganizing the relief of the poor (*l'assistance publique*) to increase to the widest extent relief to women, mothers, young children, widows with children on their hands, young workwomen and adults threatened with tuberculosis.

The Credit Lyonnais. Boulevard des Italiens, Paris.

Every woman in the employment of this concern has, in the event of child-birth, leave of absence for thirty days with full pay.

Grants for family expenses made to the workmen and widows employed in proportion to their salaries: 10 francs per month for the second child and 15 francs for the third and others following, or 10 francs per month for the third and 15 francs for the fourth and others following. The grant is withdrawn for boys at the age of 15 and for the girls at the age of 16.

The Association of the Friends of the *Crédit Lyonnais* grants the following assistance to mothers whose husbands do not draw a salary above a certain sum.

Women in child-bed receive during four weeks a sum equal to the grant made by the *Mutualité Maternelle*, of Paris.

A premium is given to the mothers who suckle their infants.

Grands Magazine du Louvres

Six weeks absence on full pay is given the mother in child-bed.

In various localities people are at last waking up to the danger of the dry atmosphere of the ordinary schoolroom and in many schools experiments at least with various plans for humidifying the air are being made. From the Pierce public school in Brookline, for example, it is reported that the air has been humidified to some extent by a perforated pipe led from the main pipe to the air chamber and the relative humidity in consequence is 45% to 50% while at a neighboring school it is about 35%, and it is reported that now with a temperature of some 62° to 64° neither scholars nor teachers complain.

From a private school in Newton Miss Evelyn Ellis reports an interesting fresh air experiment for nine weeks in two classrooms. The rooms have been kept at about 60° Fahrenheit. The following definite results are reported; in case of some children a general improvement in health, in others decrease of nervousness, and an improvement in the concentration of the pupils, this being specially noticeable in some cases; but the plan adopted did not in this instance protect the children from the usual colds. The teachers are unanimous in approving 60° as the optimum temperature for studying and teaching, and the children are said to show no fatigue and to be as fresh at the close of school as at the opening, even at the last period on Friday.

The detailed report of the temperature indoors and out during the experiment is as follows:

"Average for Oct. in front room 64°; for Nov. 61°; Dec. (one Week) 61°.
" " " " new " 61°; " " 60°; " " " 61°.
" " " outdoors 56°; " " 42°; " " " 21°.
This has meant the south windows more or less open, practically all the time, except at the beginning of school on a few of the coldest mornings."

Superintendent Martindale, of Detroit, reports that in that city during the months of September and October there were 6,236 open air classes, and he suggests that it would be well if the Board of Education could arrange for out-door classes for the greater part of the school children from May to July and from September to November.

A well-known writer in German educational periodicals, Hermann Scherk, has proposed a formal petition addressed to the Prussian *Kultusminister* asking that a special week be set apart in which parents may be allowed to visit the regular classes of the school attended by their children. Under existing regulations no visitors are allowed at any time except by a special permit which entails considerable formality and delay. The advantage of a nearer relation of parents to the school is urged and it is suggested that the enhanced interest of parents, who are the taxpayers, might also redound to the advantage of the teacher as well as the child. In view of the circumstances the petition seems extremely moderate and its success to be desired.

THE

PEDAGOGICAL SEMINARY

Founded and Edited by G. STANLEY HALL

VOL. XVIII JUNE, 1911 NO. 2

THE LAW AND THE AMERICAN CHILD[1]

By THOMAS CHARLES CARRIGAN, A. M., Clark University

CONTENTS

PAGES
1. Introduction 121
2. Marriage 123
3. Divorce 126
4. Employment of pregnant mothers 130
5. En Ventre Sa Mere 131
6. Abortion 132
7. Birth 134
8. Midwives 135
9. Infanticide 135
10. Prevention of blindness 136
11. Vital statistics 136
12. Legitimacy and illegitimacy 137
13. Milk laws 139
14. Compulsory school attendance laws 141
15. Truancy 143
16. Medical inspection of schools 145
17. Laws for child protection 150
    (i) Societies for prevention of cruelty to children . . . 150
    (ii) Offenses against children forbidden *under penalty* . . 152
18. Juvenile court laws 161
19. Child labor laws 165
20. Rights of the child 168
21. Rights of parents 171
22. Majority 172
23. Summary 173
24. Suggestions 175
Bibliography 181

(1) INTRODUCTION

Beneath the Children's Institute at Clark University, there is a statue of the late George Frisbie Hoar—a former Trustee of the University, a United States Senator and a Jurist. To some interested in Child Welfare this statue symbolizes that courage, hope and humanity which characterized the Senator's life and which were manifested in his prevention of the deportation of the Syrian children in 1901, and in 1903 led the second session of the Fifty-seventh Congress to enact Sec. 37 of Chap. 1012 of the United States Statutes, which provides "Whenever an alien shall have taken up permanent residence in this country and shall have filed his preliminary declaration to be a citizen and thereafter shall send for his wife or minor children to join him, if said wife or either of said children shall be found to be affected with any contagious disorder, and it seems that said disorder was contracted on board the ship in which they came, such wife or children shall be held under such regulations as the Secretary of the Treasury shall prescribe until it shall be determined whether they can be permitted to land without danger to other persons; and they shall not be deported until such facts have been ascertained." (19, 2, 298.)

---

[1] The writer is indebted for assistance to President G. Stanley Hall, Dr. William H. Burnham, Dr. Theodate L. Smith and Librarian Louis N. Wilson, of Clark University, also to Thomas J. Homer, Esq., of Boston, Rev. John J. McCoy, LL. D., of Worcester, Dr. George E. Wire, of the Worcester County Law Library, and Librarian Robert K. Shaw, of the Worcester Free Public Library.

Near the northern terminus of the same street on which the University is located, stands the Worcester County Court House. Within a few steps beyond the entrance, the visitor comes to an arch on which is emblazoned: "Here Speaketh the Conscience of the State Restraining the Individual Will."

On Thursday, January 26, 1911, in an address to the young men and women of the Worcester Evening High School another who measures up to the best traditions of the Massachusetts Supreme Court Bench, Mr. Justice Rugg, said: "I believe those words of Senator Hoar at our Court House make the best definition of law extant." Law, then, in the United States at the beginning of this second decade of the twentieth century, may be assumed to be that legislative and judicial expression of the public conscience by which the individual is governed. And as our people are the State, it would seem to follow that our laws are never better nor worse than the American people demand.

The term "child" in this study is synonymous with the legal term "infant" and is intended to include all the years of minority.

The following pages contain a brief survey of some laws that concern the American child. It is not the purpose of this paper to follow out any of these laws in detail, to do so would require a separate volume for each of several of the laws outlined. The recency of the laws mentioned in this study is noted under the topics through references to the bibliography. Statutes, later than those cited by some of the authorities enumerated in the bibliography, have been inserted. Obviously no claim can be made that the latest revisions have been presented—the legislatures of most of the states are now in session and new laws are being enacted daily.

(2) Marriage

Just as infancy is the legal status of persons under age, marriage is the legal status of husbands and wives. After a valid marriage man and woman are husband and wife, and their offspring are legitimate children.

Professor Stimson in his "Popular Law Making" says "It is always to be remembered that the law of marriage, and divorce as well, was originally administered by the Church. Marriage was a *sacrament;* it brought about a status; it was not a mere secular contract, as is growing to be more and more the modern view. Indeed, the whole matter of sexual relations was left to the Church, and was consequently matter of sin and virtue, not of crime and innocence. Modern legislation has, perhaps, too far departed from this distinction. Unquestionably, many matters of which the State now takes jurisdiction were better left to conscience and to the Church, so long as they offend no third party nor the public." (39, 324-5.)

Capacity of Parties in General. A person may be generally incapable of contracting marriage because of (a) want of age; (b) want of mental capacity; (c) want of physical and sexual capacity; (d) relationship by blood or marriage with the other party; (e) being of a different race from the other party; and (f) having been married before and that marriage not being at an end.

(a) Want of age. At common law the marriage of a male over fourteen and a female over twelve was valid. At least "thirty states, including the District of Columbia have by statute prescribed a higher age limit for marriageable consent, and in those states the marriage of a minor below the common law age of consent and the statutory age of consent is voidable by the minor on arriving at the statutory age of consent.

"In Minnesota and Wisconsin the statutory age of consent is fixed at 18 for the male and 15 for the female, but the statute does not declare that marriages under such ages, shall be void, therefore the courts have held them to be voidable, only. In the remaining 17 states the ages of consent remain the same as at common law. Three of these states, Kentucky, Louisiana and Virginia, having adopted said ages by statute" (1,1136).

The lowest statutory age for a male is fourteen. The states in which marriage can be contracted by a male at fourteen years are Kentucky, Louisiana, and Virginia. The states in which the statutory limit is fifteen years are Kansas and Missouri. Those in which it is sixteen years are the District of Columbia, Iowa, North Carolina, Texas and Utah. Those in which it is seventeen years are Alabama, Arkansas, and Georgia; those in which it is eighteen years are Arizona, California, Delaware, Idaho, Illinois, Indiana, Michigan, Minnesota, Montana, Nebraska, Nevada, New Hampshire, New Mexico, New York, North Dakota, Ohio, Oklahoma, Oregon, South Dakota, West Virginia, Wisconsin and Wyoming; and twenty-one in most of the remaining states.

Age limit for females. The lowest age at which a valid marriage can be contracted by a female is twelve years. The states in which the statutory limit of twelve obtains are Kansas, Kentucky, Louisiana, Missouri and Virginia. In the following states it is fourteen years: Alabama, Arkansas, District of Columbia, Georgia, Iowa, North Carolina, Texas and Utah. The states in which the statutory limit is fifteen are Minnesota, New Mexico, North Dakota, Oklahoma, South Dakota and Wisconsin.

The states in which the statutory limit is sixteen years are Arizona, Delaware, Illinois, Indiana, Michigan, Montana, Nebraska, Nevada, New Hampshire, Ohio, West Virginia and Wyoming. The statutory limit is eighteen years in Idaho, Massachusetts, and New York. In other states for which no minimum marriageable age is given the provisions of the common law seem to apply.

The age below which parental consent is required for the marriage of a male is twenty-one years in forty states and territories in three states it is 18, and in one state 16. In Tennessee it is sixteen years, and in Idaho and North Carolina eighteen years.

In Georgia, Michigan and South Carolina no age is fixed for parental consent for the male. The age below which parental consent is required for the marriage of a female is fixed at 21 in 9 states, at 18 in 34 states (including D. C.), and at 16 in 3 states. (1.1137.) It is sixteen in Maryland and Tennessee. It is twenty-one years in Connecticut, Florida, Kentucky, Louisiana, Pennsylvania, Rhode Island, Virginia, West Virginia, and Wyoming. No statutory limit is established in New Hampshire, New York, and South Carolina. In all the other states and territories it is eighteen years. In Massachusetts, permission from the Probate Court is required for the marriage of a male under eighteen or of a female under sixteen.

(b) *Mental Capacity*. The marriage of the insane, persons absolutely *non compos*, was always void both at Common law and the Church law as well. By recent laws Connecticut and Minnesota prohibit the marriage of an epileptic, imbecile, or feeble-minded woman under 45 years of age or cohabitation by any male of this description with a woman under 45 years of age, and marriage of lunatics is void in the District of Columbia, Kentucky, Maine, Massachusetts, Nebraska.

(c) *Physical and Sexual Capacity.* Marriage of impotent persons has always been void; Michigan prohibits the marriage of persons having sexual diseases; by recent laws Indiana and California refuse marriage licenses to persons under the influence of intoxicants or drugs or infected with certain transmissible diseases; and "finally most startling of all the proposal looms in the future to make every man contemplating a marriage submit himself to an examination, both moral and physical, by the state or city officials as to his health and habits, and even that of his ancestry, as bearing upon posterity." (39.327-8.)

(d) *Consanguinity and Affinity.* Marriage between first cousins is forbidden in Alaska, Arizona, Illinois, Indiana, Kansas, Missouri, Nevada, New Hampshire, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, South Dakota, Washington and Wyoming, and in some of them is declared incestuous and void, and marriage with step-relatives is forbidden in all states except Florida, Hawaiian Islands, Iowa, Kentucky, Minnesota, New York, Tennessee and Wisconsin. In Hawaii, Porto Rico and the Philippines marriages are prohibited within the fourth degree of consanguinity.

(e) *Miscegenation.* Marriages between whites and persons of negro descent are prohibited and punishable in Alabama, Arizona, Arkansas, California, Colorado, Delaware, Florida, Idaho, Indiana, Kentucky, Louisiana, Maryland, Mississippi, Missouri, Nebraska, North Carolina, Oregon, South Carolina, Tennessee, Texas, Utah, Virginia and West Virginia. Marriages between whites and Indians are void in Arizona, North Carolina, Oregon, and South Carolina; between whites and mongolians in Arizona, California, Mississippi, Oregon and Utah.

(f) If one has been married before and that marriage is not at an end, he of course cannot contract another marriage. If he goes through the form of a second marriage under such circumstances, he is guilty of bigamy, which is an offense punishable in all states. In nearly all states and territories the statutes provide that a person may contract marriage after the disappearance of a former husband or wife (the former marriage not having been dissolved by divorce or annulled) if the latter has been continuously absent for a specified number of years and has not been known to be living during this period. The length of time which the absence without news has continued is three years in Florida, Iowa, and New Hampshire. It is two years in Pennsylvania. It is seven years in Maine, Maryland, Massachusetts, Mississippi, Missouri, North Carolina, Oregon, Rhode Island, South Carolina, Vermont, Virginia, West Virginia and Wisconsin. It is five years in Alabama, Arizona, Arkansas, California, Colorado, Delaware, District of Columbia, Georgia, Idaho, Illinois, Indiana, Kansas, Kentucky, Louisiana, Michigan, Minnesota, Montana, Nebraska, Nevada, New Jersey, New Mexico, New York, North Dakota, Ohio, Oklahoma, South Dakota, Tennessee, Texas, Utah, Washington, Wyoming.

Marriage Licenses. "Wisconsin seems to be the only state requiring the license to be taken out several days before the marriage. Only two states, Louisiana and Maine, appear to have any provision for the filing of objections, by parents, guardians or others, to a contemplated marriage. In Louisiana the license issues immediately upon the making of the application. In Maine notice of the intention to apply for a license must be made at least five days before the issuing of the license." (1.1138.) New Hampshire has just adopted this Maine plan. All the states and territories, except South Carolina, require marriage licenses, and also, except South Carolina require every marriage solemnized to be reported to some official specified by law. However, in Maine, Maryland, Iowa and Kansas a license is not required for the marriage of members of the Society of Friends, or Quakers. In Pennsylvania, Delaware, Maryland, Georgia and Ohio the parties, instead of securing a license, may have recourse to the publication of banns. There are also other minor exceptions in certain states.

3. DIVORCE

The American people are divided on matters pertaining to divorce. Those opposed to any divorce, that carries the legal right of remarriage during the life time of the divorced husband or wife, sometimes combine with those urging the fewest legal causes of divorce, and the coalition presents a united front against the exponents of "the open door" in divorce legislation. Some of the divorce reformers maintain that there are insidious influences planning to amend the marriage vows, so as to read "Till *divorce* doth us part;" that such a modification can be expected of an age that has legally evoluted or devoluted or devilized unto progressive fragmentary polygamy and polyandry on the installment plan. They tell us that divorce is a modern institution; that is divorce by the secular courts; that such "divorce as the Roman Church, recognized (without the right of remarriage) or was granted by the act of Parliament, was the only divorce existing down to the year 1642, when one Hannah Huish was divorced in Connecticut by the General Court, 'with liberty to marry again as God may grant her opportunity,' and about that time the Colony of Massachusetts Bay enacted the first law (with the possible exception of one in Geneva permitting divorces by ordinary courts of law" (39, 326). The divorce reformers allege that the advance in present methods beyond those of the seventeenth century is shown by many a modern Hannah Huish, who believing that God helps her who helps herself, makes her own "opportunity" by keeping on her waiting list at least one "minute man," who, too often, is himself waiting anxiously for some divorce mill to grind out the welcome refrain—"Off with the old, on with the new." They call our attention to the pathetic figure in some of these cases, *the child* learning the shifting designations for his father's former wife—his mother, his father's present wife—his stepmother, his mother's former husband—his father, his mother's present husband—his stepfather, with perchance a few other stepmothers and stepfathers intervening to complicate the task. They assure us that whatever the pedagogical value in the mastery of such a lesson, the child's ideals of "family life," "home," "mother," and "father"can hardly contribute much to his moral uplift before or his country's after his arrival at manhood. The adherents of latitude in divorces, on the other hand, have their array of arguments for their position. One or two typical replies are: "Many clergymen argue that to have only one cause, adultery, is the worst law of all, as it drives the parties to commit this sin when otherwise they might attain the desired divorce by simple desertion" (39,323). Again they ask, "How can the child be possibly benefited in a home of parents, that are agreed that their particular "marriage is a failure," but are willing to try other marriages? Moreover, the difference in condition, education, religion, race and climate is so great throughout the Union that it is unwise, as well as impossible to get all of our forty-eight States to take the same view on this subject, the Spanish Catholic as the Maine free-thinker, the settler in wild and lonely regions as the inhabitant of the old New England town over-populated by spinsters" (39, 323). "Nevertheless, it is not questionable that modern American legislation, particularly in the code States, in California, New York, and the west generally, is based upon the view that marriage is a simple contract, whence results the obvious corollary that it may be dissolved at any time by mutual consent. No state has thus far followed the decision to this logical end, on the pretended assumption that the rights of children are concerned but the rights of children might as well be conserved upon a voluntary divorce as after a scandalous court proceedings.

One possible view is that the Church should set its own standard, and the State its own standard, even to the extreme of not regulating the matter at all except by ordinary laws of contract and laws for the record of marriage and divorce and for the custody, guardianship, support, and education of children, which would include the presumption of paternity pending an undissolved marriage, but all divorce to be by mutual consent. It is evident to any careful student of our legislation that we would be rapidly approaching this view but for the conservative influence of Massachusetts, Connecticut, Pennsylvania, New Jersey, and the South, and but for the efforts of most of the churches and the divorce reform societies. Which influence will prove more powerful in the end it is not possible to predict." (39.325.)

Weak must be the grievance, and arrested must be the ingenuity of that husband or wife, in some parts of our country, who cannot discover relief in one or more of the thirty-five causes for divorce now on the statute books of the states of the Union.

Causes of Divorce

South Carolina has no divorce for any cause.

The following table of causes for absolute divorce and some of the States recognizing each cause is of interest:

(1) Abandonment or desertion—In all except New York, District of Columbia, North Carolina and South Carolina.

(2) Adultery—Sexual Immorality—In all states but South Carolina.

(3) Attempt to take Life—Illinois, Tennessee and Louisiana.

(4) Causes deemed sufficient by courts—Washington.

(5) Civil Death—Rhode Island.

(6) Consanguinity—Pennsylvania, Georgia, Florida and Mississippi.

(7) Crime—Conviction or Imprisonment—All except Maine, Rhode Island, New York, New Jersey, Maryland, District of Columbia, North Carolina. South Carolina and Florida.

(8) Crime against nature—Alabama.

(9) Cruelty—Extreme Cruelty—Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, Delaware, Georgia, Florida, Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, North Dakota, South Dakota, Nebraska, Kansas, Kentucky, Tennessee, Mississippi, Louisiana, Oklahoma, Texas, Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Washington, Oregon, and California.

(10) Defects of Disposition—Violent temper—Florida and Kentucky.

(11) Fraud or Fraudulent Contract—Connecticut, Pennsylvania, Georgia, Ohio, Kansas, Kentucky, Oklahoma and Washington.

(12) Fugitive from Justice—Virginia and Louisiana.

(13) Habitual Use of Drugs—Maine, Massachusetts, Rhode Island and Mississippi.

(14) Illegality of Marriage—Bigamy—Pennsylvania, Florida, Ohio, Illinois, Missouri, Kansas, Tennessee, Mississippi, Arkansas, Oklahoma and Colorado.

(15) Illicit carnal intercourse—Maryland, Virginia and West Virginia.

(16) Incapacity to contract Marriage—Mental Incapacity—Georgia, Mississippi, Idaho, Utah and Washington.

(17) Indignities and Defamation—Pennsylvania, Missouri, Tennessee, Louisiana, Arkansas, Wyoming, Washington and Oregon.

(18) Intolerant Religious Belief—New Hampshire and Kentucky.

(19) Intemperance—Habitual Drunkenness—Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, Delaware, Georgia, Florida, Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, Kansas, Kentucky, Tennessee, Alabama, Mississippi, Louisiana, Arkansas, Oklahoma, Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Washington, Oregon and California.

(20) Lack of real consent to marriage—Duress or force—Pennsylvania, Georgia, Kentucky and Washington.

(21) Loathsome Disease—Kentucky.

(22) Lewd Conduct—Kentucky.

(23) Misconduct—Rhode Island and Wisconsin.

(24) Neglect of duty—Ohio, North Dakota, South Dakota, Kansas, Oklahoma, Montana, Idaho and California.

(25) Neglect to provide—Maine, Vermont, Massachusetts, Rhode Island, Delaware, Indiana, Michigan, Wisconsin, Nebraska, Tennessee, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, and Washington.

(26) Other causes—Void and voidable Marriages (not otherwise specified)—Rhode Island and Maryland.

(27) Personal unfitness to contract marriage—Impotency—All except Vermont, Connecticut, New York, District of Columbia, South Carolina, Iowa, South Dakota, South Dakota, Texas, Montana, Idaho, and California.

(28) Pregnancy before Marriage—Virginia, West Virginia, North Carolina, Georgia, Iowa, Missouri, Kansas, Kentucky, Tennessee, Alabama, Mississippi, Wyoming, New Mexico and Arizona.

(29) Previous Divorce in Another State—Florida, Ohio and Michigan.

(30) Presumption of Death—Rhode Island and Connecticut.

(31) Refusal to move to State—Tennessee.

(32) Vagrancy—Missouri and Wyoming.

(33) Voluntary Separation—Rhode Island, after ten years; Kentucky, after five years.

(34) Violence endangering life—Pennsylvania, Iowa, Missouri, Kentucky, Alabama and Arkansas.

(35) Want of age—Delaware.

Limited Divorces

Limited divorces or separations from bed and board are granted in Alabama, Arkansas, Delaware, District of Columbia, Georgia, Indiana, Kentucky, Louisiana, Maryland, Michigan, Minnesota (in favor of wife only), Rhode Island, New Jersey, New York, North Carolina, Pennsylvania (in favor of wife only), Rhode Island, Tennessee (in favor of wife only), Vermont, Virginia, West Virginia and Wisconsin.

Children of the Divorced

The United States Census Bureau issued in 1910 a report of the results of a compilation of statistics of divorces granted in the courts in the United States for a period of twenty years: being from 1887 to 1906, both years inclusive. In the cases included in the report, in 376,694 or 39.8 per cent. of the whole number, there were children of the parties to the divorce, and in 380,608 or 40.2 per cent, no children were reported. In 188,323 cases or 19.9 per cent, no mention was made of children and the presumption is that no children were involved.

Alimony

At least eighteen states have statutory provisions on alimony which make the wife "equally with husband, liable for the maintenance of the minor children, while in others such liability of the wife will attach only where she has been adjudged the guilty party. A few statutes provide that the separate estate of the wife shall be taken into consideration, and that alimony may be refused if she has sufficient property for her needs. A tendency has appeared in the newer legislations to limit the amount which either party may receive to an alimentary pension payable only so long as it may be needed." (29, 151-2.)

A synopsis of the marriage and divorce Statutes of the various states is contained in "The law of Marriage and Divorce" by Frank Keezer, Boston, 1906, pages 193-343.

(4) EMPLOYMENT OF MOTHERS

Diligent search has failed to find a single law in any American state regulating when a pregnant mother shall cease working or how soon she may return to her employment after her child is born. On this subject Professor Stimson writes as follows:

"Now all these laws arbitrarily regulate the hours of labor of women at any season without regard to their conditions of health, and are therefore far behind the more intelligent legislation of Belgium, France, and Germany, which considers at all times their sanitary condition, and requires a period of rest for some weeks before and after childbirth. The best that can be said of them, therefore, is that they are a beginning. No law has attempted to prescribe the social condition of female industrial laborers, the bill introduced in Connecticut that no married woman should ever be allowed to work in factories having failed in its passage." (39.219.)

The following (from the Quarterly Bulletin of the International Labor office) is a fairly complete list of the foreign countries having regulations:

(1) The period in Spain after confinement is from 4 to 6 weeks, and another phrase in the law adds, "A woman in the

eighth month of pregnancy may ask leave to cease work, which shall be granted if medical opinion supports her application." (24.2.20.)

(2) In Austria also a law provides that in stone quarries, lime, sand and gravel pits women who are approaching their confinement shall not be employed. (24.3.139.)

(3) In the German Empire the law provides that women shall not be employed for eight weeks, including the time before and after confinement, and at least six weeks must intervene between childbirth and return to work. (24.3.335.)

(4) In Italy the prohibited period is one month after confinement, and in the rice fields one month before and after confinement. A medical certificate as to the length of pregnancy is required, and the law adds, "It shall be sufficient if such certificates show that the women in question have not yet reached the last month of their pregnancy." (24.1.486, 24.2.580 and 24.3.183-195.)

(5) Following is a list of the countries which prohibit the employment of women after confinement, and the length of the prohibited period.

Denmark—4 weeks, unless by permission of medical officer. (24.1.181.)
Appenzell, Canton of Switzerland, 6 weeks. (24.3.124.)
Argentina—30 days. (24.3.28.)
Berne, Switzerland—from 4 to 8 weeks. (24.3.119.)
Bosnia and Herzgovina—4 weeks. (24.4.7-193.)
Norway—6 weeks. (24.4.346.)
New Zealand—4 weeks. (24.4.30.)
Roumania—3 to 4 weeks. (24.4.46.)

(6) In most of these countries the woman's position must be kept open for her until her return. In most of these cases where the state provides sick insurance, the women are permitted to apply for this assistance during the period of prohibited employment.

(5) EN VENTRE SA MERE

"A child is the living offspring of human parents either before or after birth. A child *en ventre sa mere* is a child while yet unborn. Although the point was formerly in doubt, it is now settled in this country, that from the time of conception the infant is *in esse*, for the purpose of taking any estate which is for his interest, whether by descent, devise or under the statute of distributions; provided, however, that the infant is born alive, and after such a period of fœtal existence that its continuance in life might reasonably be expected." (2.10.625.) Beck, Medical Jurisprudence, Vol. I, P. 407 (12 ed.), says, "As a general rule, it seems now to be generally conceded that no infant can be born viable, or capable of living, until one hundred and fifty days, five months after conception. There are however cases mentioned to the contrary. In such cases we should recollect that females are liable to mistakes in their calculations and that conceptions may take place at various times during the menstrual intervals, and thus vary the length of gestation. Such early births are at the present day very generally and very properly doubted. . . . We may . . . . conclude that between five and seven months, there have been instances of infants living, though most rare; and even at seven, the chance of surviving six hours after birth is much against the child," and see Chitty, Med. Jur. 406. On the other hand, by statute, a child born ten months after the death of the father comes within the rule. Massie v. Hiatt, 82 Ky., 314. (11.10.626.) See also "(7) Birth." The divorce libel of Schwartz v. Schwartz now pending in Boston, Suffolk County, Massachusetts, is remarkable. The libellant, the wife, in petitioning for the dissolution of the marital tie also requests the Court to grant her the custody of her unborn child.

(6) ABORTION

"Abortion is defined to be the delivery or expulsion of the human fœtus prematurely, or before it is yet capable of sustaining life. . . . The defendant's intent to cause or produce an abortion controls and constitutes an essential element of the offense." (11.1.170.) At common law it is a criminal offense to cause or procure an abortion upon a woman who has become quick with child, but as to whether a common law offense is committed by causing or procuring, with the consent of the woman, an abortion before such a quickening, there is a conflict of authority. To the effect that such an abortion constitutes no criminal offense are the following authorities:

Iowa—Hatfield v. Gano, 15 Iowa, 177; Maine—Smith v. State, 33 Me., 48; Maryland—Lamb v. State, 67 Md., 524; Massachusetts—Com. v. Bangs, 9 Mass., 387; Michigan—People v. McDowell, 63 Mich., 229; New Jersey—State v. Cooper, N. J. L., 52; New York—Evans v. People, 49 N. Y., 86.

But contra, see the following cases:

Arkansas—State v. Reed, 45 Ark., 333; North Carolina—State v. Slagle, 83 N. C., 630; Pennsylvania—Mills v. Com., 13 Pa. St., 631.

"Quick with child" and "with quickchild" are synonymous terms. The words "big" and "great" are tantamount to the word "quick." In Evans v. People, 49 N. Y. 86, 90, Allen, J., says: "Quick is synonymous with 'living', and both are the opposite of 'dead.' The woman is not pregnant with a living child until the child has become quick. If the child is a living child from the instant of conception, then all the authorities, medical and legal, are sadly at fault in their attempts to distinguish between mere 'pregnancy' and 'pregnancy with a quick child,' and legislators have been laboring under the same hallucination in legislating upon the subject for all the acts passed in reference to abortion in this country and in England recognize the fact that the child does 'quicken,' that is, becomes endowed with life, at a certain period, longer or shorter, after conception, and that there is a period during gestation when although there may be embryo life in the fœtus there is no living child. And to the same effect see Smith v. state, 33 Me., 48; Com. v. Parker, 9 Met. (Mass.), 263. (11.1.172.) Dwight in his Medical Jurisprudence writes "By the term quickening are described certain peculiar sensations usually noted by the mother at about four and one-half months following conception." (12.147.) To many, the better rule would be that of the Catholic Church, namely, that there is life "*ipso momento conceptionis*" and that an abortion even then is murder. The woman on whom the abortion is produced is not a principal. In some states, however, by statute, the woman is made punishable; but her offense is separable from that of the person administering the drug or performing the operation. But in Smith v. Gaffard, 31 Ala., 45, it was held that a statute prohibiting the administration by any person, to a pregnant woman, of any drug or substance with intent to procure her miscarriage, does not make it an offense for a woman to take a drug with intent to produce a miscarriage. (11.174.) Section 15 Chap. 212, Revised Laws of Massachusetts provides that whoever administers, advises, prescribes, aids or assists in an abortion shall, if the woman dies, be punished by imprisonment in the state prison for not less than five nor more than twenty years; and if the woman does not die, by imprisonment in the state prison for not more than seven years and by a fine of not more than two thousand dollars. Massachusetts and other states have provided penalties of "three years imprisonment and a fine of not more than a thousand dollars for advertising, giving or conveying any notice, hint or reference to any person, or to the name of any person, from whom, or to any place where anything or means whatever, or any advice or knowledge, may be obtained for the purpose of causing or procuring the miscarriage of a woman pregnant with child." (Mass. Revised Laws—Chap. 212—Sec. 16.)

(7) BIRTH

Continuing the subject treated under topic (5) *En ventre sa mere*, as to the degree of life necessary for inheritance Dwight says: "Modified by certain conditions, that will be spoken of later, a child whether of full term or not, whether or not affected by disease or conditions which make it impossible that life shall be prolonged, providing there is evidence of life, is capable of inheriting. It is not necessary that respiration should be established. It is not necessary that the child should cry. Neither is it necessary to prove that a complete, independent circulation was established. Pulsation of the umbilical cord after delivery, a slight active motion in one of the extremities, or pulsation in an artery, is in itself proof of life to a sufficient extent for the purposes of inheritance. It is usually necessary to demonstrate that complete birth has taken place. Some, however, have held that the partial birth of a living child is all that is necessary. Such rulings, however, have been contradicted, as they bring up rather difficult questions as to the extent of birth necessary to inherit. Crying and respiration may occur before birth is complete, but this evidence is of doubtful value." (12.198.)

"Not a single state, not even a single city, in the entire United States possesses complete registration of births. Boston claims to have about the best, only 96 per cent. . . The era of modern sanitary civilization may be marked by the dates upon which various countries began to record infant mortality. Some countries—China, Turkey and the United States—even yet possess no records of infant mortality. Unless the American people wake up, China and Turkey will have satisfactory data for infant mortality long before the United States. . . The omission of the United States from the international data for births is on account of our almost entire lack of effective birth registration.

"Talk about the registration of births in the United States. Why for not more than one-half (55.3 per cent) of the total population of the United States is there even fairly accurate registration of deaths alone. Many states—practically the entire South—make no more records of the deaths of their citizens than if they were cattle; not even so much, for blooded cattle have their vital events recorded, while human beings are thrown into their graves without a trace of legal registration. And even the states that have fairly good registration of deaths, and that have had such registration for many years, grossly neglect the equally important, or even more important, registration of births. . . Our native born children of native parents are as worthy of protection as the children of any other country, and the children born to foreign parents in this country should have the same safeguard as about their cradles as if they had been born in a foreign land. America should not mean barbarity in its relation to infant life. The ægis of protective civilization should rest upon the infant of American birth, and a proper record be made of the vital events of his life for his personal protection, legal use and for the most important sanitary information which can alone be obtained from such records." (Dr. Cressy L. Wilbur, in Report of the Committee on Birth Registration. Proceedings of The American Association for Study and Prevention of Infant Mortality, Johns Hopkins University, Baltimore, November 9-11, 1910.)

(8) MIDWIVES

In the following states midwives are examined and licensed by law:—Connecticut, District of Columbia, Illinois (violators prosecuted) Indiana, Minnesota, Missouri, New Jersey, Ohio, Wisconsin and Wyoming (practice exempted in cases of emergency). The practice of midwives is exempted in Arizona, Arkansas, Idaho, Kentucky, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Virginia and West Virginia. The states having "no law" regulating the practice of midwives are Alabama, California, Colorado, Delaware, Florida, Georgia, Iowa, Kansas, Louisiana (law does not apply to midwives in rural districts and plantation practice), Maine, Massachusetts, Michigan, Montana, Nebraska, Nevada, New Hampshire, New Mexico, New York, North Dakota, Oregon, Pennsylvania, Rhode Island, South Dakota, Tennessee, Texas (no specific law, examination provided for those who wish to practice obstetrics alone). The act "does not apply to those who do not follow obstetrics as a profession, and who do not advertise themselves as obstetricians or midwives, or hold themselves out to the public as so practicing," Utah (no specific law. Those desiring to practice obstetrics are examined and licensed, but the law permits practice "in case of emergency," and it exempts "persons practicing obstetrics in communities where there are no licensed practitioners"), Vermont and Washington. (23.103-431.)

(9) INFANTICIDE

By infanticide is understood "the destruction of life in newborn children." The law assumes, as a rule, that an infant whose dead body was found was born dead unless proof is brought that the opposite is the case. This crime is one of the most common among all nations, especially among the poorer classes, and these problems are very frequently presented for medico-legal investigation. There are three questions which are perhaps of the greatest importance in connection with them. Under the English as under that of most nations, the crime of murder does not vary, and is subject to the same punishment whether the victim is an infant or of more mature age. It is treated under a different heading in works on legal medicine, as it presents different problems for solution. The law requires that it should be proved:

1. That sufficient uterine age and development has been reached to allow of a separate existence on the part of the child.
2. That the child was born alive.
3. Proof of the manner of death. (12.173.)

(10) PREVENTION OF BLINDNESS

Connecticut, Illinois, Indiana, Maine, Maryland, Massachusetts, Michigan, Missouri, New Jersey, New York, Ohio, Oregon, Pennsylvania, Rhode Island, Tennessee, and West Virginia have laws requiring cases of ophthalmia neonatorum to be reported. In Connecticut midwives and nurses are liable to a fine of $200 or imprisonment not to exceed six months, or both, "Should one or both eyes of the baby become inflamed, swollen or reddened at any time within two weeks after birth and the midwife or nurse fails to report in writing within six hours to health officers or legally qualified practitioner of city, town or district where parents reside that such inflammation, etc., exists." Minnesota requires the parent as well as the nurse and midwife to report within twelve hours to local health officers if one or both eyes of an infant, under two months, become inflamed, reddened and diseased. Ohio has a law making the treatment of ohpthalmia neonatorum by midwife or general practitioner without notifying an occulist or sending the child to a hospital, a misdemeanor with a heavy fine and an imprisonment clause. Unfortunately the law is reported as "not operative." (43.52.2047-2056.)

(11) VITAL STATISTICS

The American Medical Association Bulletin, Vol. 6, No. I, September 15, 1910, contains a model bill on vital statistics patterned, in the main, after the Pennsylvania law. (42.) Section 6 requires that stillborn children or those dead at birth shall be registered as births and also as deaths. Midwives, under this model bill, are not allowed to sign certificates of death for stillborn children. Section 13 provides that the physician or midwife, "and if there be no attending physician or midwife, then it shall be the duty of the father or mother of the child, householder or owner of the premises, manager or superintendent of public or private institutions in which the birth occurred, to notify the local registrar, within ten days after the birth, of the fact that a birth has occurred." Section 21 makes failure to register cause of death, false certification of cause of death and failure to file a proper certificate of birth misdemeanors punishable by fines of from five to two hundred dollars. This model bill has become the law of some twenty states, and has been endorsed by the following: The Census Department, Department of the United States Government, the American Medical Association, the American Bar Association, the American Association for the Study and Prevention of Infant Mortality and in 1910 by the general officers of the American Federation of Labor." Registration of births, is urged, as "a necessary part of any plan for the study of infant mortality, because without such registration we have no means of ascertaining definitely the relation between the annual death rate and birth rate. In other words it enables us to find out where we are. It is an essential part of any plan for the reduction of infant mortality because the prompt registration of births increases the possibility of preventing certain infantile diseases and blindness. The registration of births is also of the utmost importance for legal reasons, as a means of establishing the identity of the individual." (Leaflet issued by the American Association for Study and Prevention of Infant Mortality, September 1, 1910.) When it is remembered that Bulletin 104 of the year 1909 of the United States Bureau of Census shows that the death of babies less than a year old constitutes one-fifth of our total mortality, it would seem that even the most indifferent and the laziest will not begrudge the effort necessary to record the child's entrance into and his departure from this world. Yet so much notice is denied to the child in too many states.

(12) LEGITIMACY AND ILLEGITIMACY

Under the common law only the child born in wedlock was legitimate. The Canon law, which is the law of the Church, decreed that the child born before the marriage became legitimate on the marriage of the parents, and as "Canon law lies at the base of much American law" (27.356), the rule has come to be universal in the United States that a child whose parents marry after its birth, no matter how long (39.140), becomes legitimate. So also, a child is legitimate when born within a competent time after the termination of marriage by death or divorce (11.5.525). And finally most of our states consider that a child, born during a void marriage entered into in good faith, is legitimate. Of course even the child born during marriage may be shown to be illegitimate and it must be remembered that any legal presumption of legitimacy stands only until the contrary is shown. However, our courts have placed the burden of proof on the one alleging illegitimacy and on the grounds of public policy and decency ordinarily will not allow any father or mother to testify that a child, presumed to be legitimate, is, as a matter of fact, illegitimate. Thus far it will be noted that marriage controlled legitimacy. But our legislators have conceived or known of situations where the father of an illegitimate child might not want or be able to marry the mother but was anxious to remove the stain of illegitimacy from the child. Such a legal process is called legitimation, and differs from adoption which usually refers to strangers in blood. Professor Stimson's American Statute Law reads: "In several states, the father of an illegitimate child, by publicly acknowledging it as his own, receiving it as such (with the consent of the wife, if married) into his family, and otherwise treating it as legitimate, thereby rendered it legitimate for all purposes"—at least in California, Nevada, Dakota and Idaho. (37.756.) "In several states, the putative father (if he was unmarried at the birth of the illegitimate child) has a process in court by which he might legitimate the child"—in North Carolina, Tennessee, Georgia, New Mexico, Alabama and Mississippi. (37.757.) In 1887 Maine enacted the law that an illegitimate child is heir if the father adopts him into his family, or in writing makes acknowledgment that he is the father before a justice or notary; and he inherits from the kindred of such father, whether lineal or collateral, and they from the child, as if legitimate: Maine 1887, 14. (38.98.) Massachusetts permits the father to adopt his illegitimate child with the consent of its mother, and thereby make it his heir. This is considerable progress since "all the earls and barons answered with one voice that they would not change the laws of England." (39.40.) Florence Kelley in 1882 in commenting on the changes in the legal status of the illegitimate child since Blackstone, wrote: "So far is his condition assimilated to that of the legitimate child that the statement is now true that the chief legal disadvantage of the illegitimate child is his inability to inherit." (26.96.) The mother has a superior right to the custody of her illegitimate child but she may lose her right by abusing or neglecting the child. The putative father seems to be entitled to the custody against all but the mother. However, the best interests of the child will be the controlling factor in deciding the question of custody in any court. (11.5.637.) The statutory liability of the putative father for the support of the legitimate child is to-day universal. Alabama, Georgia, Illinois, Indiana, Maine, Massachusetts, Michigan, New Hampshire, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Carolina and Wisconsin authorize their courts to imprison the putative father as one means of enforcing an order for the maintenance of the illegitimate child. (11.5.670.)

(13) MILK LAWS

Dr. Henry L. Coit, of Newark, New Jersey, seems to have been the first to urge legislation "on the subject of milk production designed for clinical purposes." Abandoning the effort to get a state law on this subject Dr. Coit organized a Medical Milk Commission which worked independently of state authorities as a professional body and from year to year his plan was duplicated in various parts of the country until now there are seventy-two such Milk Commissions. In many instances these commissions have started a crusade through municipal activities for the improvement of the general supply of milk. These commissions are professional bodies without pecuniary interests or commercial relations with the production of milk and have as their general object, the obtaining of milk suitable for sick-room purposes and infant feeding. The Medical Milk Commissions has been recognized by the Government through the Departments of Agriculture and the Marine Hospital Service, both departments having issued bulletins on the history of the "Pure Milk Movement." Four years ago, the Medical Milk Commissions then at work (of which there were only twenty-two) were federated for the purpose of extending the propaganda and influencing the organization of this movement in other centres of population. This work has been carried on from the office of the Secretary of this federation, by Dr. Otto P. Geier, of Cincinnati. Both Dr. Coit and Dr. Geier insist that "certified milk has a definite meaning as outlined in the plans for the original Commission and it has not only received federal recognition but in three states has been protected by law." These three states are Kentucky, New York and New Jersey, and the Michigan legislature has a similar bill before it for passage. The New Jersey Law as the law of the state in which certified milk had its origin, is considered the most comprehensive and is entitled "An Act providing for the incorporation of medical milk commissions and the certification of milk produced under their supervision. "This act will be found in State of New Jersey Laws of 1909. Four sections of this law follow:

"8 Every such association shall have power to enter into agreement in writing with any dairyman or dairymen for the production of milk under the supervision of such association for the purposes enumerated in section one hereof and to prescribe in such agreement the conditions under which milk shall be produced, which conditions, however, shall not be below the standards of purity and quality for 'Certified Milk' as fixed by 'The American Association of Medical Milk Commissions,' and the standards for milk now fixed or that may hereafter be fixed by the Board of Health of the State of New Jersey. In any contract entered into by any such commission with any dairyman or dairymen, it may be provided that such medical milk commission may designate any analsyts, chemists, bacteriologists, veterinarians, medical inspectors or other persons who in its judgment may be necessary for the proper carrying out of the purposes of such commission for employment by such dairyman or dairymen and to prescribe and define their powers and duties, and that such persons so employed by such dairyman or dairymen may be discharged from employment whenever such medical milk commission may request such discharge or removal in writing.

"9. All containers of any kind or character used in the carrying or distribution of milk produced by any dairyman or dairymen under contract with any medical milk commission shall have attached thereto or placed thereon a certificate or seal bearing the name of the Medical Milk Commission with which such dairyman or dairymen producing such milk shall be under contract, which certificate shall have printed, stamped or written thereon the day or date of the production of the milk contained in any such container and the words 'Certified Milk' in plain and legible form.

"10. The work and methods of any Medical Milk Commission organized under this act and of the dairies on which milk is produced under contract with any such commission shall at all times be subject to investigation and scrutiny by the Board of Health of the State of New Jersey. The Secretary of said State Board of Health shall be an ex-officio member of every milk commission organized under this act.

"11. No person, firm or corporation shall sell or exchange or offer or expose for sale or exchange as and for certified milk, any milk which is not produced in conformity with the methods and regulations prescribed by and which does not bear the certification of a medical milk commission incorporated pursuant to the provisions of this act or organized or incorporated in some other state for the purposes specified in section one hereof, and which is not produced in conformity with the methods and regulations for the production of certified milk from time to time adopted by the American Association of Medical Milk Commissions, and which is below the standards of purity and quality for certified milk as fixed by the American Association of Medical Milk Commissions; and any such person, firm or corporation violating any of the provisions of this section shall be guilty of a misdemeanor."

The Milk Commission appointed by the Mayor of Philadelphia enumerates the essential points (see The Worcester Gazette, Saturday, March 18, 1911).

"Of course, pure milk—comparatively speaking—is to be had. But as a rule there is a menace all along the line.

"Take, for instance, the farm where milk is produced. Unless modern and improved sanitary principles are enforced, the beginning of the danger is right there.

"Then comes the railroad journey to the city.

"Next the handlers come in and eventually the milk is served at the home.

"Now there is not a step from farm to customer that is not of the highest importance to guard.

"The cow must be milked by cleanly hands in a cleanly place.

"The milk must never for a moment be exposed to unsanitary conditions, for milk is a tremendous absorbent of everything that is impure.

"It must be sent to railway station in a cooled condition, and it must be transported to the city platform in cooled cars.

"The dealer must transfer the cans in wagons that will maintain the low temperature.

"Finally the milk must be delivered in a cooled state, Then it is up to the housekeeper to see to it that the bottles shall be placed in iced receptacles.

"To put it briefly, milk must be under constant supervision and direction and control from the time the cow yields her milk to the time of delivery to the purchaser.

"That is the problem that confronts not only the commission but City Councils and the Legislature. For there must be hearty co-operation from start to finish.

"When we can have milk under such constant inspection we shall be sure of having a pure supply. And that is precisely what we must have. No matter what the cost is, we must have it."

"True, Pure Milk at any cost. Every baby in every home throughout the country demands it, and when the King commands his subjects must obey. But more than that the public health and posterity demand it."

The Report of the United States Commissioner of Education for the year ending June 30, 1910, Vol. I, at page 141, says that "in order to provide a supply of pure milk, cream, and butter for pupils who procure luncheons at the schools, the St. Louis School board prepared for the year 1909-10 a special contract embodying such sanitary precautions as they thought necessary to insure purity in the dairy products supplied." (44.1.141.) If the St. Louis plan is copied generally throughout the country the movement for pure milk is destined to be successful at an earlier date than has been expected.

(14) Compulsory School Attendance Laws

The statutory provisions relating to compulsory education and child labor throughout the United States are compiled in the Report of the United States Commissioner of Education for the year ending June 30, 1910, Vol. I, pages 148-153 inclusive, and in Monroe's Cyclopædia of Education, Vol. I, pages 289-93 inclusive. The Cyclopædia contains an excellent article of about ten pages on "Compulsory Attendance" by Dr. David Snedden, Massachusetts Commissioner of Education. Recourse should be had to Dr. Snedden's article for much information that cannot be condensed into the space assigned to the subject in this paper. The compilations mentioned show that Alabama, Florida, Georgia, Louisiana, Mississippi, South Carolina and Texas have no compulsory education law. In North Carolina and Tennessee legislation applies only to certain sections, and in Virginia "compulsory attendance law is optional with the voters of any county, city or town (36.1.293), with these exceptions: "A. Throughout almost the entire United States some school attendance is compulsory from 7 or 8 years of age to 14. B. Massachusetts, New York, Idaho, New Hampshire and others require certain educational qualifications, otherwise attendance is compulsory to 16. The 1908 law of New Jersey sets an upper limit of 17 for all who have not completed the eight grades; those finishing the elementary school course may not leave until 15. C. A number of states require, especially in cities, that children under 16 must attend school regularly unless definitely employed. Illinois, Maryland, Pennsylvania, and Missouri (St. Louis and Kansas City only) are examples. D. Laws on compulsory education have frequently been nullified because the amount of attendance each year was not specified, and consequently evasions were easy. Even yet some states prescribe a minimum amount, *e. g.*, Iowa, 16 consecutive weeks; Missouri (outside of St. Louis), not less than half the term; Nebraska, two thirds of term. The majority of states having well-developed legislation now making attendance obligatory for the entire term during which school is in session. E. Recently special legislation in some states provides for compulsory attendance from 8 to 20, at State School for Deaf. Nebraska, Minnesota, and North Carolina (for whites), have somewhat similar legislation. In early stages poverty of parents paved the way for exemptions, but the modern tendency is away from this. Many states provide for supplying free books to needy children. In Ohio and Colorado boards of education must give aid in clothing where it is necessary. In some large cities philanthropy has secured the provision of scholarships for those whose parents need aid in keeping children at school." (36.1.293.)

The maximum penalty on parents for neglect to comply with the compulsory education law is as follows:

Delaware, first offense: $2 or 2 days imprisonment, subsequent offenses: $5 or 5 days imprisonment; Connecticut, $5 for each week's absence; Maryland $5; Pennsylvania, first $2, subsequent $5; West Virginia, first $2, subsequent $5; Virginia, first $10, subsequent $20; District of Columbia, Illinois ("and stand committed until paid"), Iowa, Massachusetts, Montana, New Hampshire, North Dakota, Ohio, Rhode Island, South Dakota ("costs and stand committed till paid") fall within the group authorizing the imposition of a fine of $20. In Kentucky the delinquent parent can be fined for the first offense $20 and $50 for subsequent offenses. The $25 group includes Arizona, Arkansas, Colorado, Kansas, Nebraska, North Carolina, Vermont, Washington and Wyoming. Nevada has a penalty of $100 for the first and $200 with costs for subsequent offenses. The states where parents can be sentenced to imprisonment are New York, which has a provision for five days or $5 for the first offense and 30 days and $50 for subsequent offenses; Missouri, 10 days and $25; New Mexico, 10 days or $25; Oregon, 10 days and $25; California, 25 days and $50; Maine, 30 days or $25; Minnesota, 30 days or $50; Indiana, 90 days and $25; Michigan, 90 days and $50; Wisconsin, 3 months and $50; and Idaho judges can make stubborn parents take notice by imposing a sentence of 6 months and a fine of $300.

"The American states are obviously moving toward certain standards in compulsory attendance which will partly depend upon development of additional school facilities. For example, child labor legislation is increasingly closing up industries to youths under 16. The raising of educational standards will compel many children to attend school until they are 16. The state will provide for those who are demonstrably needy, rather than allow dependent parents to withhold from children their educational heritage. The increasing appreciation of the need of vocational education will result in the provision of special school facilities for imparting either the whole or part of this education. It is not improbable that the advanced position of Germany in this respect (*i. e.* compelling children from fourteen to eighteen to give part time to continue education of a vocational or other character), will be imitated. Special schools will be provided for defectives and delinquents, and attendance at these made obligatory. Ultimately a complete system of registration of all children must be provided, to be carried on by attendance officers, and centralized in each limited school area, not only for the enforcement of attendance but for obtaining compliance with child labor legislation, and the provision of medical or other aid." (36.1.295.)

(15) TRUANCY

In the last section we saw that a parent, whose child does not attend school as required, may be fined and imprisoned in most states. And the law usually states the minimum amount of the child's absence that will make the parent liable. In Massachusetts every person, who fails to cause a child under his control to attend school for five day sessions or ten half day sessions within any period of six months, is liable to a fine of not more than twenty dollars. An "Attorney General of New York has ruled that more than two unexcused absences in four consecutive weeks constitute a violation of the law" (4.190), for which the parent can be fined and imprisoned.

Concerning the prosecution of parents, Bardeen's School Law says: "A child should not be arrested unless an *habitual* truant or disorderly and insubordinate while in attendance at school. Frequently parents are only too glad to have their children committed as truants and cared for at town or county expense until they are permitted by law to go to work. The most direct and effective method of reaching parents and forcing upon them the duty of keeping their children in school is by penalizing the parent as provided in the statute. Where parents are prosecuted the most, truancy exists the least." (4.191.) Massachusetts and other states provide that "whoever induces or attempts to induce a child to absent himself unlawfully from school, or employs or harbors a child who, while school is in session, is absent unlawfully from school, shall be punished by a fine of not more than fifty dollars."

The law makers of our states passed through childhood before they were called to serve as legislators. Some of them will acknowledge that the truant schoolboy has become the able legislator. Realizing that the majority of truants do not take their parents into their confidence when "playing hookey," the members of our legislatures have also enacted laws relative to habitual truancy. And provision has been made for boarding truant schools, sometimes called "Training Schools," to which *only* habitual truants, habitual absentees and habitual school offenders are committed by our courts. The inmates of our boarding truant schools are usually children that have got beyond the control of their parents or those that come from "broken homes." The child must be discharged from the boarding truant school upon becoming sixteen years of age. Dr. Snedden believes that "much good legislation relating to children breaks down because of poor machinery of enforcement. In Connecticut there is a state agent with assistants who attends to the execution of laws on compulsory education and child labor. In all other states the enforcement of the law is local. In nonurban areas school boards and local constables are authorized to proceed against parents failing to keep children in school; in cities it is now common to constitute special attendance officers with limited police powers. Most of this machinery is yet very defective." (36.1.293.) He maintains that four different types of special class or school are necessary in any city to procure the adequate carrying out of the law. (a) Those pupils who have become quite incorrigible, and whose parents have lost control of them, must be sent to an institutional school, committed for a term of years. Only thoroughgoing reform is adequate. (b) A day truant school, where hours are long and manual work abundant. This school, while allowing pupils to sleep at home, should aim primarily to keep them off the street and away from contagion of bad company. Such schools do not exist in American, but are found in English cities. (c) Special classes should be provided for pupils who cannot easily be brought under the ordinary school discipline. These classes may have the same programmes as the ordinary classes, but should be under charge of teachers of sufficient maturity, experience, and personal character to cope with this type of child. (d) Possibly a fourth type of class should be for those who by irregular attendance have hopelessly fallen away from the regular class attainments." (36.1.294). Some states by legislation make the parents in part responsible for the support of their children in truant schools.

(16) MEDICAL INSPECTION OF SCHOOLS

The legal aspects of medical inspection of schools is treated in Chapter II, "Medical Inspection of Schools" by Gulick and Ayres. (16.159.183.) The statutes cited by Gulick and Ayres were those in operation about the year 1908. At the time "Medical Inspection of Schools" was written, Massachusetts had the distinction of being the only state in the Union having a "mandatory medical inspection law." (16.159.) By a mandatory medical inspection law is meant a law enacted by the state legislature whereby cities and towns are compelled to provide for medical inspection in their schools. Under date of March 7, 1911, Dr. Ayres writes: "Legal provision is made for Medical Inspection in thirteen states and in the District of Columbia. Four are compulsory laws. They are the laws of Colorado, Massachusetts, New Jersey and Indiana. In the last state the law refers to Indianapolis only. Permissive laws exist in California, Connecticut, Maine, New York and the District of Columbia. Permissive laws applying to cities exist in Ohio and Washington. Laws applying to sight and hearing are in force in Louisiana, Vermont and Virgina."

The abstracts of the Medical inspection laws that follow are, in the main, taken from a forthcoming paper on Medical Inspection of Schools," by Mr. George H. Shafer, of Clark University:

Colorado. The responsibility here rests with the teachers, they note defects and inform the principal, who notifies parents. Parents are compelled to have the child examined; if they neglect, they are turned over to the Bureau of Child and Animal Protection for prosecution. If parents are indigent, the child is referred to the county physician.

Massachusetts. The school Committee of every city and town in the commonwealth shall appoint one or more school physicians, shall assign one to each public school within its city or town, and shall provide them with proper facilities for the performance of either duties as prescribed in this act, and shall assign one or more to perform the duty of examining children who apply for health certificates in accordance with this act; provided, however, that in cities wherein the board of health is already maintaining or shall hereafter maintain substantially such medical inspection as this act requires, the board of health shall appoint and assign the school physician. Every school physician shall make a prompt examination and diagnosis of all children referred to him, and such further examination of teachers, janitors and school buildings as in his opinion the protection of the health of the pupils may require." Teachers make examinations of eyes and ears. The statutes provide First, for a general examination of all the children in the public schools at least once a year for any defect or disability tending to interfere with their school work. Second, for a special examination of children (a) who show signs of being in ill health or of suffering from infectious or contagious diseases (b) who are returning to school after absence on account of illness or from unknown causes, also the examination of pupils who apply for health certificates. The school committee shall notify parents of all defects found.

New Jersey. "Every board of education shall employ a competent physician to be known as the medical inspector and fix his salary and term of office." Every board of education shall adopt rules for the government of the medical inspector which shall be submitted to the State Board of Education for approval."

The medical inspector shall examine every pupil, to learn whether any physical defects exist, and keep a record from year to year of the growth and development of such pupil, which record shall be the property of the Board of Education, and shall be delivered by said medical inspector to his successor in office. Said inspector shall lecture before the teachers at such times as may be designated by the Board of Education, instructing then concerning the methods employed to detect the first signs of communicable disease, and the recognized measures for the promotion of health and the prevention of diseases. The law also compels parents to remedy defects. It went into effect April 13, 1909.

California. The Training School for September, 1910, published at Vineland, New Jersey, has an article on "Health and Development Supervision in California." On pages

248-9 one reads, "Mr. George L. Leslie, director of the medical inspection of the Los Angeles schools, who is chiefly responsible for the passage of the law, summarizes its provisions as follows:

"1. The establishment (under the direction of boards of educaton or boards of school trustees) of annual physical examinations of school pupils and a follow-up service to secure the correction of defective development, thus maintaining continuous health and growth supervision of children and youth. "2. The requirement of physical examination of all candidates for teachers' positions in the public schools to determine vitality and efficiency and make possible further examination of teachers as may be advisable to determine continued fitness for work, and to determine the amount of work to be required of the teaching force of the schools consistent with efficiency and continued service. "3. The adjustment of school activities to health and growth needs and development processes of pupils. "4. The special study of mental retardation and deviation of pupils in the schools. "5. Expert sanitary supervision. "6. It provides for a class of educators—experts in physiology, hygiene, and practical psychology—who can skillfully diagnose defective growth and development, and take more intelligent steps to grow children and youths. It provides for the co-operation of this class of educators and all educators with skilled physicians."

New York provides for the medical inspection of all children in attendance upon schools under their supervision, whenever in their judgment such inspection shall be necessary, and to pay any expense incurred therefor out of funds authorized by the voters of the district or city or which may properly be set aside for such purpose by the common council or the board of estimate and apportionment of a city. (Subd. Added by L. 1910, chap. 602.)

Ohio has a law as follows: Section 7692. Any board of education in a city school district may provide for the medical inspection of pupils attending the public schools. For that purpose it can employ competent physicians, nurses, and provide for and pay all expenses incident thereto from the public school funds, or by agreement with the board of health or other board or officer performing the functions of a board of health for such city. It may provide for medical and sanitary supervision and inspection of the schools which are under the control of such board of education and of the pupils attending such schools, by a competent physician selected by the parent or guardian of the child, but on failure of the parent or guardian, then by the district physicians and other employee to be appointed by such board of health. (R. S. Sec. 4018a.)

The District of Columbia has a permissive law. State of Washington has a permissive law for districts of first class.

In 1907 *Connecticut* passed a law authorizing the board of education or town committee of any town, or the board of education or committee of any school district to appoint one or more school physicians.

The school physician is to examine all pupils referred to him by principals, and teachers, janitors and school buildings as in his opinion the protection of the health of the pupils may require." The law further says: "The school authorities of any town or school district which has appointed a school physician in accordance with the provision of this act shall cause every child attending the public schools therein to be separately and carefully tested and examined at least once in every school year to ascertain whether such child is suffering from defective sight or hearing, or from any other physical disability tending to prevent such child from receiving the full benefit of school work, or requiring a modification of such school work in order to prevent injury to the child or to secure the best educational results. Notice of defects of diseases are to be sent to parents with such advice or order relating thereto as the physician may deem advisable." Provision is also made for the employment of *school nurses.*

The law of Maine is largely copied from that of Massachusetts. It differs in that it is permissive in case of the town. And further the following articles make it altogether permissive.

Expenses which a city or town may incur by virtue of the authority herein vested in the school committee shall not exceed the amount appropriated for that purpose in cities by the city council and in towns by a town meeting. (March 16, 1909.)

Further the law of Maine makes no mention of examination for employment certificate.

Utah has a law as follows: Board of Health has jurisdiction in matters pertaining to health in schools. The local boards of health shall have jurisdiction in all matters pertaining to the preservation of the health of those in attendance upon the public and private schools in the state, to which end is hereby made the duty of each of the local boards of health.

1. To exclude from said schools any person, including teachers, suffering with any contagious or infectious disease, whether acute or chronic, or liable to convey such disease to those in attendance.

2. To make regular inspection of all school buildings and premises, etc.

Vermont has a law requiring inspection of eyes and ears by teachers.

It will be noted that a penal provision applying to neglectful parents of defective children is mentioned as occurring in the laws of Colorado and New Jersey. This penal provision is endorsed by many, if not all, of those in sympathy with medical inspection of schools—Also Connecticut authorizes the employment of school nurses. Relative to the school nurse, Gulick and Ayres say:

"Dr. S. W. Newmayer, of Philadelphia, terms the school nurse 'the most important adjunct to medical inspection'." Dr. John J. Cronin, of New York, in writing of the work of the school nurse says: "It is most highly endorsed by teachers, principals, educators, parents, and children. Since this innovation many cities throughout the world have copied our nursing system as far as possible, up to the standard set by this city." Dr. Ernest J. Lederie, formerly Commissioner of Health of New York City, says, "The school nurse has been voted a success from the day she began work." Dr. Walter S. Cornell says of the school nurses in Philadelphia, "As a rule, in the foreign, poverty stricken sections they are invaluable." Dr. Thomas F. Harrington, Director of the Department of School Hygiene of Boston, writes, "It does not seem possible to conceive a more satisfactory arrangement or a more effective piece of school machinery than the school nurse under school supervision."

"Citations from the best authorities on the subject, similar in tone to those quoted, might be indefinitely multiplied. It may be said, indeed, that there is no division of opinion on the subject. The leading authorities without exception advise and recommend school nurses in connection with the work of medical inspection" (16. 66). Dr. John J. Cronin, Assistant Medical Inspector of the New York City Board of Health, is of the opinion that there should be one medical inspector and one nurse for each two thousand pupils" (16.143). As to Dr. Cronin's right to speak on this question, Gulick and Ayres write, "Dr. John J. Cronin, of New York City, has made most wise, extensive, able and best known medical inspection from the standpoint of education" (16.6). New York pays its nurses $75 per month and employs them for twelve months in the year. Boston pays the supervising nurse $924 for the first year, which is increased by an annual increment of $48 to a maximum of $1,116. The assistant nurses receive $648 per year and an annual increase of $48 until the maximum of $840 is reached. New Haven pays its nurses $600 per year" (16.143-4). A very interesting and instructive "table collected by the bureau of municipal research of New York City, April 1, 1910, and intended to show what school authorities are doing to promote the physical welfare of school children in cities having a population of 8,000 or more," appears in the Report of the U. S. Commissioner of Education for 1910, Vol. 1, pages 141-7. In the same volume at pages 140-1 "Dental Inspection in the Cleveland Public Schools" is mentioned. The final paragraph reads "As a result of the investigation the board of education accepted a proposition of the Cleveland Dental Society to conduct gratis for the year 1910 the following work: To make one dental examination of all pupils in the public schools within the year; to establish for the year four centrally located clinics for the treatment of the indigent poor; and to conduct a series of practical and illustrated talks on oral hygiene." The Statute Laws on the Practice of Medicine in all states are complied in "Legal Medicine and Toxicology" by R. L. Emerson, M. D., New York, 1909.

(17) Laws for Child Protection

(1) *Societies.* Under this topic, after glancing at the organized movement for the prevention of cruelty to children, some of the laws for child protection will be considered. To any one at all acquainted with the vast amount of legislation on even "the neglected child," no excuse will be required for the omission of much important legislation in a paper of this kind. And as the scope of the topic—Laws for Child protection—is broader than commonly understood from the words: "neglected child," it follows that only the broken and disjointed outlines of the topic can be here sketched. "The Humane Movement" by Roswell C. McRea, of Columbia University, contains a "Summary of State Laws for the Protection of Children" (31.389-431). Chapter V in the same work (31.135-146) gives much valuable information relative to the organized movement for the prevention of cruelty to children. Societies for the Prevention of Cruelty to Animals were organized in 1866, eight years before similar societies for children were formed.

> "In 1874, the officers of the American Society for the Prevention of Cruelty to Animals were confronted with a case of cruelty to a child. This little girl, Mary Ellen, had been daily beaten by a stepmother and tormented in other cruel ways. The attention of charitable people was called to Mary Ellen's plight and they took up her case. It was discovered that the child could have no protection under the law until the guilt of her persecutor was established under existing legal forms. Under these circumstances they turned to the American Society for the Prevention of Cruelty to Animals, which handled the case. The investigation of other children's cases suggested the desirability of an organization that could do for children what was already being done for animals by a number of organizations. Mr. Bergh, Mr. Elbridge T. Gerry and Mr. John D. Wright who were already interested in the work for animals, launched the new venture, and Mr. E. Fellows Jenkins was drawn away from the American Society to become Superintendent of the new organization, a post just resigned by him. The Society was formed to rescue children from vicious and immoral surroundings and to prosecute offenders, to prevent cruel neglect, beating or other abuse of children, to prevent the employment of children for mendicant purposes or in theatrical or acrobatic performances and for the enforcement of all laws for the protection of minors from abuse.

The Society, during all its thirty-five years of work, has consistently avoided all alliances that would bring its activities into co-operation with other organized work for the improvement of the conditions surrounding child life. Meanwhile, the movement thus inaugurated has become worldwide. In the United States, other societies followed the New York society in the following order: 1875—Rochester, 1876—Portsmouth, N. H., 1876—San Francisco, 1877—Philadelphia, 1878—Boston, 1878—Baltimore, 1879—Buffalo, 1879—Washington, Del., 1880—Brooklyn, 1880—Richmond County, N. Y. These all adopted the New York model, as other local societies have since done, principally in the states of New York and New Jersey. The large majority of protective societies, however, combine work for children with that for animals. Indeed, aside from two California societies, two in Virginia, one in Rhode Island, one in Tennessee, one in Michigan and one in Louisiana, those above mentioned in addition to New York and New Jersey societies are the only ones in which the work for children is not combined with that for animals. This of course excludes those instances in which child protection is made a phase of the activities of societies doing general charity work." (31.135-6.)

No less authority than Professor Stimson says, "Perhaps the most dangerous tendency, at least to conservative ideas, is the increasing one to take the children away from the custody of the parents, or even of the mother, and place them in state institutions. Indeed, in some western states it would appear that the general disapproval of the neighbors of the method employed by parents in bringing up, nurturing, educating, or controlling their children, is sufficient cause for the state authorities to step in and disrupt the family by removing the children, even when themselves unwilling, from the home to some state or county institution. Any one who has worked much in public charities and had experience with that woeful creature, the institutionalized child, will realize the menace contained in such legislation" (39.337-8). And Professor Stimson's opinion seems to be indorsed in the attitude of the Pennsylvania Society for the Prevention of Cruelty to Children, according to the following: The Pennsylvania Society is another that has come to share "the modern economic thought that the normal condition of the child is in the home, even though the home be a poor one; the children often help their parents to reform, and the father and mother can in many instances be made to realize and feel that upon them is the burden of responsibility to see that their children do not become in any sense a charge upon the community. Its belief in this theory is evidenced by the fact that in the year just closed 1,522 cases have been passed over to what is technically known as 'Supervision,' cases in which perhaps on the first the breaking up of the family seemed justifiable. Endeavors have, therefore, been made in every case to preserve the family as a whole. The results obtained by visitors and agents in this work of reconstruction have been beyond belief." (31.143.)

A piece of legislation worthy of note is found in the Maryland Code P. G. L. art. 6, sec. 24, as printed on page 9 of the 6th Edition of the Manual of the Maryland Society for the Protection of Children, compiled by Lewis Hochheimer, Esquire. It reads as follows: "2. Sheltering Children—Persons who receive into their homes or employ children who have left their parents, guardians or other custodiansonon account of actual or supposed illtreatment are protected against vexatious suits by express provision of law. No person who in good faith receives, harbors, persuades away or removes from a parent, guardian or master any minor for the purpose of sheltering or protecting such minor from illtreatment or suffering can be held to incur any liability therefor." (21.9.)

(II) *Offense Against Children forbidden under Penalty.* (a) *General.* According to Mr. McRea's "Summary of State Laws for Child Protection" there are general statutes in some states. It does not follow that, even in the states where no such general statutes exist, the strong arm of the law cannot be invoked for child protection. Mr. McRea found four offenses mentioned in some general statutes namely: "To willfully cause or permit (a) life or health of any child to be endangered, (b) or unnecessarily expose to weather, (c) or cruelly torture or punish, (d) or neglect or deprive of necessary food, clothing and shelter." Kansas (boy under 14 or girl under 16. Search warrant may be issued and child removed.), Michigan (officers may search on issuance of warrant), Utah (boys under 14, girls under 16), and Wyoming seem to be the only states that can be credited with general statutes enumerating the four offenses. Twenty states have no general statutes and the remaining states include all those having from one to three of the four general statutes mentioned.

(b) *Abandonment, Desertion, Non-Support.* Here is included (a) abandonment, (b) or willful failure to provide food, care, shelter, etc., to minor, (c) sentence may be suspended under bond to observe conditions imposed by court, (d) failure to comply with such conditions leads to execution of sentence, Illinois (under 12) Iowa, Maryland, Minnesota (under 15). Nebraska, North Dakota, Ohio, Pennsylvaia (under 16), Texas (under 12) and Wyoming have so legislated. Alabama, Arkansas, Mississippi and Nevada are reported as without laws. Michigan has a law that if the parent is imprisoned, the earnings, if any shall be paid to family (1907 No. 44). In Arizona it is deemed abandonment to send a child to a saloon or house of ill-fame.

(c) *Exhibitions and Employments* (*not child labor*). To apprentice, exhibit or use any child under——years (a) in any place where intoxicants are sold, (b) as gymnast, acrobat, dancer, etc., (c) for obscene or immoral purposes, (d) for begging, (e) in any business or exhibition dangerous to life or limb, (f) for peddling, (g) at rag-packing, junk gathering, etc., (h) exception made of church, school, musical or other entertainments for educational or scientific purposes. Wyoming, for children under 14, seems to be the only state that has specific laws on the entire eight subdivisions. Sixteen states are reported as having no legislation. The remaining states include Illinois that has legislation covering seven of the eight divisions of our topic, New York and Ohio with six provisions each.

(d) *Obscene Literature, etc.* (a) To show, publish, give or sell literature, prints, etc., (b) or permit a child to distribute such: Illinois, Minnesota (to show in public to minor), Montana (or criminal news to minor under 16), Nebraska (or criminal news to minor), New Hampshire, New York, and North Dakota (under 18) have enacted laws. Arizona makes it an offense to use indecent language before a minor; Florida penalizes the marking of school places in obscene way by others than pupils; Iowa prohibits the introduction of obscene literature into home, or give to minor, or use phonograph for indecent songs; and Kansas by statute excludes minors from trials where vulgar evidence is produced.

(e) *Admittance to Resorts.* District of Columbia, Kansas, Louisiana, Maryland, Oklahoma, South Carolina, Utah and Virginia are reported as having no laws on the admittance of children to resorts. Twelve states are reported as forbidding their admittance to resorts, unaccompanied by parent or guardian. The following forbid the admittance of children to places where intoxicants are sold: Arizona (under 16), California (under 18), Colorado, Connecticut (unlawful for a minor to loiter about a saloon), Delaware (under 18), Idaho (under 16), Illinois, Indiana (male under 16, female under 17), Iowa, Maine, Michigan, (under 17), Nevada (loiter in), New Hampshire, New Jersey (to play games), New York, North Carolina (under 18 or billiard room, or bowling alley, when adverse notice has been served by parent or guardian), Ohio, Oregon, Pennsylvania (under 18; or any place dangerous to health or morals—1885, Act. of May 28, see 1907, Act of May 29—under 16 in house of prostitution or opium den), South Dakota, Vermont, West Virginia (under 18, or any place dangerous to health or morals) and Wisconsin (or girl under 17 to dance or ball), California makes it an offense to send or direct a minor under 18 to saloon, gambling or immoral place. Colorado forbids admittance to places where obscene plays are performed or where game of chance or for playing for wager is in progress. Massachusetts forbids a child under

14, to be admitted to any resort, after sunset, unaccompanied by adult and under 17, to any dance hall or skating rink unaccompanied by adult, school or church dances excepted. Michigan prohibits the admission of a child under 17 to theatre, dance hall or show place or billiard or ten-pin room; or for a minor to remain in; school pupils included, 1907, No. 55. Minnesota makes it criminal to admit or invite a minor under 18 to a house of ill-fame. In New Jersey the child under 16 cannot be admitted to theatres, dance-halls or show-places and the fines for violations go to the poor fund. It is a crime in the State of Washington to allow a minor to play cards in one's home without consent of parent or guardian, Ball. Code, Sec. 7314.

(f) *Sales of intoxicants to Minors.* Relative to selling liquor to minors, Lewis Sutherland's Statutory Construction reads: "Statutes forbidding the sale of liquor to minors are common, for a treatment of the subject see Black on Intoxicating Liquors, No. 415-422. Some courts hold that an honest and well founded belief that the minor was of lawful age is a good defense to a prosecution under the statute. Other courts hold that such a belief is no defense and that the vendor must ascertain at his peril whether the person to whom he sells is a minor. Where the statute made it unlawful to sell, furnish or give liquor to a minor, a saloon-keeper who allows an adult to treat a minor in his saloon is guilty of furnishing liquor to the minor within the statute. In such a case the saloon-keeper has also been held to deal or traffic in liquor with the minor. But such a transaction is held not to be a sale or gift to the minor. Where a minor expressly buys liquor for an adult, pays for it with the adult's money and delivers it to him, it is not a sale to the minor. Where sales on the written order of the parent, guardian or family physician were expected, it was held that a general order from a parent to sell or give his son from day to day and at all times as much liquor as he wanted was not such an order as the statute contemplated. An act forbidding the sale of liquor to minors provided that a sale by an agent should be deemed and taken to be the act of his master. It was held that a sale by an agent was not conclusive, but only *prima facie* evidence of a sale by the master, and that it would be a good defense that the master had in good faith forbidden such sales. (28.1276-7.) In the following states the sale of intoxicants to minors is forbidden: Alabama (parent has right of action), Arizona (under 16; or to give without consent of parent or guardian), California (under 18), Colorado, Connecticut (and minor is punishable for misrepresentation of age). Delaware (or to procure for), Florida, Georgia (father has right of action against person who furnishes without his permission. Sale forbidden without permission of parent or guardian), Idaho (or to give), Illinois (to give, without order of parent or physician, or to buy or procure for, without such order), Indiana (and misrepresentation of age punishable, loitering in saloon not to be permitted), Iowa (or to give to, or to procure for, except on order of parent or physician), Kansas (treating or giving by any parent, guardian or physician), Kentucky (without order of parent), Louisiana (or to furnish or to obtain for, or to allow to loiter in saloon), Maine, Massachusetts (whoever sells or gives to a minor either for his own use, the use of parents or of other person, or allows a minor to loiter on premises shall forfeit one hundred dollars for each offense to be recovered by parent or guardian in an action of tort), Minnesota (or pupil except by licensed pharmacist), Mississippi (and minor punishable for false representation of age), Missouri (without permission of parent or guardian), Montana (or gives), Nebraska (or gives), Nevada (and false representation of age punishable), New Hampshire, New Jersey (or give, under 18), New Mexico, New York, North Carolina (to unmarried minor, or to make purchase for), North Dakota (or give, or treat except by order of parent or physician), Ohio (or furnish), Oregon (deliver to, or allow to loiter. Penalty, loss of license. Misrepresentation of age punishable), Pennsylvania (and misrepresentation of age punishable), Rhode Island, South Carolina (or furnish), South Dakota, Tennessee (or to furnish or entice to place where sold), Texas (or to give, without consent of parent or guardian), Utah (or to furnish or procure for), Vermont, Virginia (to sell or procure for pupil in school or college of State), Washington (or give, without consent of parent or guardian, minor between 18 and 21 punishable for misrepresentation of age), West Virginia (unless by prescription, or loitering about saloon), Wisconsin (misrepresentation of age by minor over 18 punishable), and Wyoming. The sale of candy containing liquor or flavor of same is forbidden. Massachusetts (more than 1% of alcohol under 16), Vermont (1906, No. 50) and Wisconsin (1907 Ch. 168).

(g) *Tobacco Laws*. Ten states now have on their statute books laws prohibiting the manufacture and sale of cigarettes and cigarette papers. They are as follows: Tennessee (1897), Wisconsin, Minnesota, South Dakota, Iowa (with $300 mulct provision), Nebraska, Kansas, Arkansas, Oklahoma and Washington. The sale of cigarettes to children is forbidden in the following states: Alabama (or furnish; or materials for such), Arkansas (or tobacco in any form, manufacture and sale of cigarettes forbidden), Arizona (under

16, tobacco in any form; or furnished), Colorado (or gift of tobacco in any form to minors under 16), Connecticut (use of tobacco in public place by minor under 16 forbidden), Delaware (or furnish, or materials for such to minor under 17), Florida (or furnish or procure, or materials for such, for minor under 18), Georgia (or furnish or materials for such), Idaho (or give or materials for such), Illinois (under 16, or tobacco in any form without written order of parent or guardian), Indiana (or furnish, or materials for such, or tobacco in any form to minor under 16, or to advise to use), Iowa (under 16, tobacco in any form. Manufacture and sale of cigarettes forbidden), Kansas (under 21, tobacco, opium or narcotic in any form). Under date of March 18, 1911, Superintendent Lucy Page Gaston of the Anti-cigarette League wrote, "The Kansas law forbids the use of tobacco in any form by minors under 21." Manufacture and sale of cigarettes are forbidden in Kentucky (under 18; or furnish such or materials for such or council to smoke), Louisiana (or material for such), Maine (or give), Maryland (under 15; tobacco in any form without permission of parent or guardian, unless acting as agent of employer). Other persons may not purchase cigarettes for a minor in Massachusetts (under 18; or not being parent or guardian gives to minor under 18; tobacco in any form under 16; or not being parent or guardian gives to minor under 16 shall be punished by a fine of not more than fifty dollars). Michigan (or furnish tobacco in any form to minor under 17, except on order of parent or guardian), Minnesota (furnishing to tobacco or allowing about premises to smoke, manufacture and sale of cigarettes forbidden), Mississippi (or furnish tobacco in any form to minor under 18 without consent of parent), Missouri (or furnish, or materials for such, to minor under 18), Montana (or give tobacco in any form), Nebraska (give or furnish tobacco in any form to minor under 18, manufacture and sale of cigarettes forbidden), Nevada (or give; or cigarette paper. Tobacco in any form to minor under 18, except on order of parent or guardian), New Hampshire (giving tobacco to minor under 18), New Jersey (cigarettes under 18; or furnish, or paper for such, under 14 tobacco in any form), New Mexico (or give; or tobacco in any form, minor under 18, or pupil, without consent of parent or guardian), New York (under 16, minors under 16 not to smoke in public places), North Carolina (minor under 17, or aid in getting, or materials for such), North Dakota (or furnish tobacco in any form), Ohio (or furnish under 16), Oklahoma (manufacture and sale of cigarettes forbidden or gift of cigarettes to any one), Oregon (under 18; or give tobacco in any form without consent of parent or guardian, and such minor may not smoke in public), Pennsylvania (under 16, tobacco in any form; or furnish cigarettes or paper to any minor), Rhode Island (unlawful for minor under 16 to use tobacco in public), South Carolina (or furnish; or materials for such. Half fine goes to informer), South Dakota (sale or manufacture of cigarettes forbidden. Unlawful for minor to smoke in public, or for any one to abet same), Tennessee (tobacco in any form without consent of parents to minor of 17, manufacture and sale of cigarettes forbidden), Utah (under 18; or furnish tobacco, opium or narcotic in any form), Vermont (under 16, or furnish tobacco without consent of parent or guardian, or furnish cigarettes or wrappers), Virginia (under 16), Washington (and of materials for such forbidden; or furnish tobacco in any form to minor; unlawful for minor to smoke cigarettes or to counsel him to smoke, manufacture and sale of cigarettes forbidden), West Virginia (or opium or furnish), Wisconsin (tobacco in any form, manufacture and sale of cigarettes forbidden), and Wyoming (under 16).

(h) *Carnal Abuse.* The carnal abuse of a female child is a felony punishable under extreme provisions for rape. "In some jurisdictions it is held that a statute punishing for rape any person who shall have carnal knowledge of any woman forcibly and against her will, or any person who shall carnally know or abuse any female under a certain age with her consent, defines but one crime and not two distinct crimes; but in others the statute is construed as defining two distinct crimes" (11.33. 1418). Statutory provisions applying to the carnal abuse of a female child are as follows: Alabama (girl under 12 by male over 16; girl between 12 and 14), Arkansas (girl under 16), Arizona (male over 14 with girl under 17), California (under 16), Colorado (male over 18 with girl under 18. If male is under 20, sentence may be commuted to commitment to State Reform or Industrial School), Connecticut (under 16; any parent or guardian who consents to the detention of a female under 21 for prostitution or carnal intercourse may be fined $1,000 and imprisoned for one year), Delaware (under 18; lascivious playing with girl under 16), District of Columbia (under 16), Florida (under 10; capability of boy under 14 shall be determined by the jury), Georgia (under 12; punishment may be death or on jury's recommendation of mercy twenty years imprisonment), Idaho (under 18, by male over 14), Illinois (under 15, by male over 17), Indiana (under 16), Iowa (under 18; also lewd act of person over 18 with child under 13), Kansas (under 18), Kentucky (under 12; under 16 over 12 lighter penalty), Louisiana (between 12 and 18 by male over 17), Maine (under 14, also between 14 and 16, lighter penalty), Maryland (under 14; also male over 18 with female between 14 and 16), Massachusetts (under 16), Michigan (under 16; male over 14 with girl 14; also to debauch a male under 15, or take a girl under 17 to house of prostitution), Minnesota (under 16; under age of 10 punished by imprisonment for life; of girl between 10 and 14 imprisonment from 7 to 30 years; of girl between 14 and 16 three months to a year in county jail or one to seven years in state prison), Mississippi (under 12), Missouri (under 14; between 14 and 18), Montana (minor 16 by male over 16), Nebraska (with chaste girl under 18, by male over 18), Nevada (under 14 by male over 15), New Hampshire (to willfully and deceitfully entice or carry away a female child under 18 for purpose of prostitution of illicit intercourse), New Jersey (under 16), New Mexico (under 10; under 14 by male over 14), New York (under 18), North Carolina ("virtuous" female between 10 and 14), North Dakota (under 18, by male over 14), Ohio (under 16 by a male over 18), Okalahoma (under 14 , male over 14, also female between 14 and 16 of previously chaste character), Oregon (under 16 by male over 16), Pennsylvania (under 16, of good repute), Rhode Island (under 16), South Carolina (under 14 and under 16, by male over 14, after abduction), South Dakota (under 18 by male over 14), Tennessee (under 12), Texas (female under 15 by male over 14), Utah (between 13 and 18), Vermont (of girl under sixteen by a male over 16; a male under 16 with a consenting female under 16 are guilty of a misdemeanor and may be committed to the Vermont Industrial School), Virginia (under 14), Washington (under 18), West Virginia (under 14. Does not apply to male under 14 with female over 12 with free consent), Wisconsin (under 18, previously chaste), and Wyoming (under 18).

(i) *Corporal punishment in Schools.* Bardeen's School Law has twenty pages on corporal punishment. After discussing the common law right of the teacher to inflict corporal punishment, Mr. Bardeen says. "A change of sentiment is manifest in recent decisions. The teacher will not find it safe to rely upon modern confirmation by courts of many decisions once rendered and long considered good authority (4.234). Every year this tendency is becoming more and more marked, and the teacher who cannot govern *without* severe corporal punishment will do well to retire from teaching before he is forced out" (4.235). The Laws of 1909 in New York read: "To use or attempt, or offer to use force or violence upon or toward the person of another is not unlawful when committed by any guardian, master or teacher in the exercise of a lawful authority to restrain or correct his child or scholar, and the force or violence used is reasonable in manner and moderate in degree" (88.1909, N. Y.). "But even here," says Mr. Bardeen, "the teacher is subject to the rules established by the trustees. When the trustees have made a rule forbidding corporal punishment, the teacher may not inflict it" (4.223). New Jersey, and some cities like New York and Syracuse forbid corporal punishment (4.221). "In 1889, Arizona dropped the enactment expressly authorizing corporal punishment" (4.236). Prior to 1899 in Arizona any teacher before inflicting corporal punishment upon a pupil must first notify the parent or guardian and one member of the board of trustees of his or her intention at least one day before such punishment is to be inflicted stating the day and hour at which the punishment will be inflicted and extending an invitation to such parent and one trustee to be present" (4.229). The law just mentioned is not reported to have required engraved invitations with "R. S. V. P." nor the presence of the coroner or a representative of the Associated Press. Cyc., (v. 35, p. 1137) reads, "As a general rule, a school teacher, in so far as it may be reasonably necessary to the maintenance of the discipline and efficiency of the school, and to compel a compliance with reasonable rules and regulations, may inflict reasonable corporal punishment upon a pupil for insubordination, disobedience, or other misconduct, but a teacher cannot inflict corporal punishment to enforce an unreasonable rule, to compel a pupil to pursue a study forbidden by his parent, or to compel him to do something which his parent may have requested that he be excused from doing, although the teacher may be justified in refusing to permit the attendance of the pupil whose parent will not consent that he shall obey the rules of the school. The infliction of corporal punishment by a teacher is largely within his discretion; but he must exercise sound discretion and judgment in determining the necessity for corporal punishment and the reasonableness thereof, under the varying circumstances of each particular case, and must adapt the punishment to the nature of the offense, and to the age and mental condition and personal attributes of the offending pupil, and, considering the circumstances and conditions of the particular offense and pupil, the punishment must not be inflicted with such force or in such a manner as to cause it to be cruel or excessive, or wanton or malicious" (11.35.1137-9). After reading this quotation one is forced to remark that the ever increasing responsibilities of the office have not yet led the public to pay the average teacher as high a wage as the average brick-layer, carpenter and plumber receive. May be it is because the brick-layer, carpenter and plumber first organized unions, and then persistently followed the injunction: "Ask and you shall receive." What has been said on corporal punishment thus far, applies to cases where the teacher has not been attacked by the pupil. The legal right of self-defense is possessed by every teacher and no legislature will attempt to take it away. Finally as to corporal punishment, Dr. Snedden says, "As in the public schools, there is a general belief that the complete prohibition of whipping would have a bad moral effect; but that by the proper development of other means of control, its use may or ought to be almost entirely dispensed with" (35.147). President G. Stanley Hall and many others subscribe to this belief.

(j) *The Neglected Child.* Judge Baker, of the Boston (Mass.) Juvenile Court in a paper read at Massachusetts Conference of Charities, Fitchburg, October, 1910, said, "Probably the case ordinarily thought of when neglected children are mentioned is that of children who have no regular meals, get only scraps of food and are constantly hungry; who are clad only in dirty, ragged outer garments, without stockings, shoes or under clothes; whose flesh is encrusted with dirt; whose hair is infested with vermin; whose parents are seldom sober, usually idle and frequently in jail. Our statutes, however, authorize interference in a much larger class of cases" (3.3). Judge Baker went on to describe the larger class by giving examples of sober, industrious parents failing to have the child's eyes treated for ophthalmia neonatorum, not providing glasses, surgical attendance or living in unhygienic quarters when able to afford better, as illustrating cases of children who "by reason of the neglect of parents are growing up without proper physical care" mentioned in the Massachusetts statutes. Other cases included the child "excellently fed and clothed and the pink of neatness" but if its parents are selling liquor illegally or letting rooms in their house for immoral purposes, the child can be taken away because in the words of the statute 'by reason of the crime of its parents' it is growing up 'under circumstances exposing it to lead an idle and dissolute life' (3.5). Again, Judge Baker said, "Children may be properly fed, clothed and fairly well cleaned but be suffered by their parents to be frequently tardy and absent from school, and spend all their time when out of school running the streets all over the city because the mother not satisfied with the husband's steady earnings of $18.00 a week, insists on going out to work herself. Such children can be brought to court because 'by reason of neglect of their parents' they are 'growing up without salutary control' " (3.5). These examples from the paper of Judge Baker, with what has been already said on "Laws for Child Protection" in this study, will give a general idea of the legal problem known as the "neglected child." In the introduction to "Juvenile Court Laws in the United States," Expert Special Agent John Koren, of the United States Bureau of the Census, wrote: "In addition to hearing cases of delinquency these courts (Juvenile Courts) are charged with the disposition of dependent and neglected children. In many instances the laws prescribing the authority and duty are so bound up together that they cannot very well be separated. Moreover, the functions of the juvenile courts and their peculiar place in the community cannot be correctly estimated if viewed solely in relation to delinquency cases. It therefore seemed wisest to incorporate in the summary the legislation relating to dependent and neglected children, so far as the juvenile courts are concerned with them." (18.3.) The various efforts in several states, and especially in large cities, to care for neglected children are summarized by Mr. Homer Folks in his monograph on the Care of Destitute, Neglected and Delinquent Children. (New York, 1902.)

(18) JUVENILE COURT LAWS

Juvenile Court Laws "have in recent years come in for the larger share of attention in all of our state legislation. Radical changes, with a view to recognizing the independence of the child and the desirability of treating it both apart from the usual rules of procedure and punishment applicable to adult criminals and also with a view to holding the parent or guardian responsible for the wrong doing of the child as well as to secure better environmental conditions by removing it entirely from the custody of the parent, have found a place in the law of most states." (32.1.624.) "Juvenile Court Laws in the United States—A Summary by States, by Thomas J. Homer; A topical abstract by Grace Abbott; Edited by Dr. Hart, of the Russell Sage Foundation, appeared in 1910, and should be consulted by every one interested in the subject. It is a book of 150 pages, and its comprehensiveness and compressibleness become evident the more it is tested and examined. This section in touching on only some of the salient points can at the most only serve as an indicator pointing to "Juvenile Court Laws in the United States Summarized" (18). Twenty-three states have enacted juvenile court laws, and they are Alabama, California, Colorado, Georgia, Idaho, Illinois (1899), Indiana, Iowa, Kansas, Kentucky, Louisiana, Massachusetts, Michigan, Minnesota, Nebraska, Ohio, Oregon, Pennsylvania, Tennessee, Texas, Utah, Washington, Wisconsin—and in the

District of Columbia. "Under the common law a child of seven was regarded as responsible for his acts and was treated as a criminal in the charge, the trial, and the disposition made of him after the trial. Under the new theory the child offender is regarded not as a *criminal* but as a delinquent, 'as misdirected and misguided and needing aid, encouragement, help and assistance;' he is kept entirely separate from the adult offender, and the probation system is used whenever practicable. These are the most important features of the new legislation which has been adopted in the states enumerated" (18.122). District of Columbia, Colorado, Indiana, Louisiana, Massachusetts, Michigan, Maryland, Missouri and Utah have created special courts which are given jurisdiction over juvenile offenders alone. "Most states have found, however, that it presented fewer legal difficulties to use some court already established in this jurisdiction." (18.123). "In the great majority of states the jurisdiction of the Juvenile Court extends to children 16 or 17 years of age. But in Illinois and Kentucky the limitation is for boys 17 and girls 18, in Louisiana, Nebraska and Oregon 18 for both, and in Utah 19 for both boys and girls" (18.125). The more inclusive laws of Alabama, Colorado, Illinois, Indiana, Kentucky, Louisiana, Michigan, Minnesota, Missouri, Nebraska, Ohio, Tennessee, Texas, Utah and Washington regard "as a delinquent any child who (a) knowingly associates with thieves, vicious or immoral persons, (b) absents itself from home without the consent of its parent or guardian or without just cause, (c) is growing up in idleness or crime, (d) knowingly visits or enters a house of ill repute, (e) visits or patronizes gambling houses, saloons, or bucketshops, (f) wanders about the street at night or about railroad yards or tracks, (g) jumps on and off trains, (h) enters a car or engine without lawful authority, (i) uses vile, obscene or indecent language or is (j) immoral or indecent" (18.126-7).

The subdivisions of delinquency conceive the child as actively at fault, while the laws covering the neglected child and the dependent child look upon them as more passive or the victims of the faults of others. And it is to be remembered that juvenile courts are concerned not only with the delinquent but also with the neglected and dependent child. The procedure in juvenile courts may be "initiated" on a petition in California, Illinois, Iowa, Kansas, Kentucky, Louisiana, Michigan, Minnesota, Nebraska, New Hampshire, Ohio, Oregon, Tennessee and Wisconsin. In Alabama, Colorado, Massachusetts, Missouri, Texas, Utah and Washington, the old word "complaint" is used. (18.127.) A "summons" issues on the filing of the "petition" or "complaint" in many states. This "summons" is addressed to the parent or guardian and directs him to appear with the child in court on a certain date. The laws in force in Indiana, Iowa, Kansas, Kentucky, Minnesota, Missouri, New Hampshire, New Jersey, Ohio, Oregon, Washington and Utah make "the trial quite informal so that an intimate friendly relationship may be established at once between the judge and the child." New Jersey and New York follow the regular criminal procedure as does also Michigan when the child is charged with a felony" (18.129). The District of Columbia and eight states reserve the right of appeal from the decision of juvenile judges. Twenty-one states require a separate Juvenile Record. A dozen states require the juvenile court to be held in a separate room and Chicago and Milwaukee have separate Juvenile Court Buildings. (18.131.) Six states "provide that the trial shall not be public and all persons not necessary to it shall be excluded." (18.132.) Pending trial no child under twelve shall be committed to jail in Illinois, Michigan and California, under fourteen in Colorado, Idaho, Kentucky, Massachusetts (except when arrested in the act of violating a law of the commonwealth or on a warrant; if over 14 may be comitted to jail if court thinks he will not otherwise appear for trial, Montana, Nebraska, Ohio, Tennessee, Washington and Wisconsin, under sixteen or seventeen in Kansas, New Hampshire, Texas and Utah (18.133.) Fifteen states have a detention "home" or "school" instead of a jail for juveniles awaiting trial. The juvenile Judge in "most states can continue the hearing from time to time, leaving the child, under the supervision of the probation officer, in its home or in some suitable family or commit it to some detention school or House of Reform or to any institution willing to receive it and having for its object the care of delinquent children" (18.134.) Connecticut, District of Columbia, Indiana and Massachusetts provide that the court may fine or imprison the child for the original offense (seldom done in Massachusetts) or for violating the conditions of probation—Illinois, Massachusetts (if child is over 14), Ohio, Oregon and Texas leave a loophole for a return to the old system by providing that the judge may order the child to be proceeded against and sentenced under the existing criminal laws of the state (18.135.) Illinois, Missouri and Wisconsin select the probation officers for their juvenile courts from eligible lists determined by competition civil service examination. In most of the states the juvenile Judge has the appointment of the Juvenile Probation officer (18.136). "The duties of the probation officers, the law provides in almost all the states having Juvenile Court Laws, shall be (a) to investigate any child to be brought before the Court, (b) to be present in court to represent the interests of the child, (c) to furnish such information as the judge may require and (d) to take charge of any child before and after trial." (18.137.) The following states have statutes punishing by fine or imprisonment parents or others who contribute to the child's delinquency: Colorado ($1,000 fine or 12 months imprisonment or both), Connecticut ($500 fine or 6 months imprisonment or both), District of Columbia ($200 fine or 3 months or both), Idaho ($500 or 6 months or both), Illinois $200 or 12 months or both), Indiana ($500 or 6 months or both), Kansas ($1,000 or one year or both), Kentucky, Massachusetts ($50 or 6 months or both), Minnesota ($500 or 6 months or both), Missouri, Nebraska ($500 or six months or both), New Jersey ($1,000 or 12 months or both), Louisiana, New York, Ohio ($1,000 or 12 months or both), Texas ($1,000 or 12 months or both), Utah, Washington ($1,000 or 12 months or both) and Wisconsin ($500 or one year or both) (21.138-9). In the following states, with the exceptions noted, a child "in no case may be sent to a common jail but to a special place of detention:" Alabama (may be so placed if captured for a felony, in nighttime, or in exceptional cases for safe-keeping until home can be found), Arizona (but no child under 12 may be committed to the Industrial School unless this seems best after probation), California (under 12. Others must be kept separate from adults), Colorado (under 14), Georgia (under 16), Idaho (under 14), Illinois (under 12,) Indiana (boys under 16, girls under 17), Iowa (under 17), Kansas (except in case of felony), Kentucky (children at jails must be looked after by matron. Dependent and neglected must be kept apart from delinquent, boys under 17, girls under 18), Louisiana (neglected and delinquent under 17), Maryland (under 16), Massachusetts (lockup or house of detention to be avoided, whenever possible—under 14, except for offense ordinarily punished by death or life imprisonment), Michigan (under 12 or with adults if under 17), Minnesota (under 14; between 14 and 16, to be separate from adults), Montana (under 14), Nebraska (under 14; between 14 and 16 not with adults), New Hampshire (under 17), New York (under 16 no longer than necessary for the purpose of transfer. Not with adults except in presence of proper officials), Ohio (under 12); Oregon (under 14 and others must be kept apart from adults), Pennsylvania (under 12, not to be sent to any correctional institution pending hearing, not to be confined in institution for adults), Rhode Island (under 16, older ones at discretion of court. State probation officer may have custody of girl under 16, not longer than six months), South Dakota (under 16), Tennessee (under 14, and not to be incarcerated except to guarantee appearance in court), Utah (boys under 14, girls under 16), Vermont (under 16, not to be sent to the house of correction for first offense, but to state industrial school), Washington (under 14, and none shall be placed with adults) and Wisconsin (under 14; and between 14 and 16, not with adults) (18.395-431). Finally it should be stated that a child in most states becomes an adult, before the criminal law, earlier than he does before the civil law, that the juvenile age fixed by the legislation of the states does not correspond to the age of majority; that when the juvenile age is passed the child is subject to treatment as an adult, although many states are not unmindful of the possibility of reformation taking place even in manhood.

(19) Child Labor Laws

A summary of the child labor laws in force in 1910 has been prepared by Laura Scott, and will be found in "Legislative Review, No. 5, American Association of Labor" (34).

All states and territories except Nevada have enacted laws on child labor. The following have laws prohibiting any child labor whatever: Arizona (under 14 during school hours without proof that child is excused from school attendance), Arkansas (under 14 without age and dependency certificate or schooling certificates), Colorado (under 14 during school term without school certificate; 14 to 16 who cannot read and write, without schooling certificate), Connecticut (under 14 when school is in session; 14 to 16 who cannot read must attend night school), Delaware (under 14 in any gainful occupation), Florida (under 12 when school is in session), Idaho (in any gainful occupation under 12; 12 to 14 during school session; 14 to 16 without required school instructions), Illinois (under 14; 14 to 16 who cannot read and write, without age certificate; 14 to 16 who cannot read and write, without age certificate and night school certificate if there is a night school held in such place), Kansas (under 14 when school is in session), Kentucky (under 14 during school hours; 14 to 16 without employment certificate), Maryland (under 12; 12 to 16 without permit), Massachusetts (under 14 while school is in session), Minnesota (under 14 when school is in session; 14 to 16 without employment permit and medical certificate if demanded), Missouri (under 14, 14 to 16 without age certificate), Montana (during school term under 16 without schooling certificate), Nebraska (during school hours under 14), New York (during school term under 14; 14 to 16 in cities of first and second class without employment certificate or school certificate), North Dakota (under 14 during the term of public school), Oregon (under 14 during school hours), Washington (under 15 without schooling certificate) and Wisconsin (under 14; 14 to 16 without permit). Night labor for children under twelve is prohibited from 8 P. M. to 6 A. M. in South Carolina in factories: mines and textile establishments—under *fourteen* in Arkansas (7 P. M. to 6 A. M. in factory manufacturing), Georgia (7 P. M. to 6 A. M. in factory, manufacturing), North Carolina (7 P. M. to 6 A. M. in any), Texas (6 A. M. to 6 A. M. in any), Virginia (6 P. M. to 7 A. M., manufacturing, mechanical mining), under *sixteen* in Alabama (from 7 P. M. to 6 A. M. in factories and mills), California (10 P. M. to 6 A. M. in hotels, laundries, manufacturing, mercantile, messenger, office, place of amusement, restaurants and workshops), Connecticut (after 10 P. M. in mercantile), Delaware (6 P.M. to 7 A. M. in any gainful occupation), District of Columbia (10 P. M. to 6 A. M.), Idaho (9 P. M. to 6 A. M. in any occupation), Illinois (7 P. M. to 7 A. M. in any gainful), Iowa (9 P. M. to 6 A. M. in elevator, factory, laundry, manufacturing, mercantile, mill, mine, packing house, shop, slaughter house, store), Kansas (6 P. M. to 7 A. M. —distribution of messages or merchandise, elevator, factory, messengers, mine, packinghouse, theatre, workshop), Kentucky (7 P. M. to 7 A. M. in any gainful occupation), Louisiana (male under 16, female under 18—7 P. M. to 7 A. M. in any work), Michigan (male under 16, female under 18—6 P.M. to 6 A.M. in manufacturing, messengers [except for telephone, telegraph or postoffice], mine, workshop), Minnesota (7 P. M. to 7 A. M. in any gainful occupation), Mississippi (7 P. M. to 6 A. M. in manufacturing), New York (5 P. M. to 8 A. M. in factory; under 16—10 P. M. to 7 P. M.—under 16 after 7 P. M.; cities of first class—in apartment house, business office, distribution of messages or merchandise, hotel, mercantile establishment, messenger, restaurant, telegraph office, transmission of messages or merchandise), North Dakota (7 P.M. to 7 A.M. any), Ohio (male under 16, female under 18—6 P. M. to 7 A. M.), Oklahoma (male under 16, female under 18—6 P. M. to 7 A. M.), Oregon (6 P. M. to 7 A. M. in any), Pennsylvania (9 P. M. to 6 A. M.), Rhode Island (8 P.M. to 6 A. M. in business establishment, factory, manufacturing, except mercantile establishments on Saturday and four days preceding Christmas), Vermont (after 8 P. M. in factory, messenger, mill, quarry, railroad, workshop), Washington (8 P. M. to 5 A. M.) and Wisconsin (9 P. M. to 6 A. M. in any); under *eighteen* in New Jersey (7 P.M. to 7 A.M. in factory, manufacture of goods of any kind, mill, workshop), New York (male 16 to 18 from 12 midnight to 4 A. M., and female 16 to 21 from 9 P. M. in factories); under *twenty-one* in Massachusetts (between 10 P. M. and 6 A. M. in mercantile, and manufacturing.

Florida, Missouri, Montana, Nebraska, Nevada, New Mexico, South Carolina, Texas, Utah, Vermont, Washington, West Virginia and Wyoming have no legislation on the number of hours that a child shall work per day or per week. Legislation in the other states as to the maximum hours of child labor is as follows: Alabama (under 14, 60 hours per week), Arkansas (under 14, 60 hours per week 10 per day), California (under 18, 54 per week 9 per day) Colorado (under 16, 8 per day), Connecticut (under 16, 58 per week), Delaware (under 16, 54 per week 9 per day), District of Columbia (under 16, 48 per week), Idaho (under 16, 54 per week 9 per day), Illinois (under 16, 48 per week 8 per day), Indiana (male under 16 female under 18, 60 per week 10 per day, under 14, 8 per day), Iowa (under 16 10 per day), Kansas (under 16, 48 per week 8 per day), Kentucky (under 16, 60 per week 10 per day), Louisiana (under 18, 60 per week 10 per day), Maine (male under 16, female under 18, 58 per week 10 per day), Maryland (under 16, 10 per day), Massachusetts (under 18 in mercantile 58 per week; under 18 in manufacturing 56 per week 10 per day, under 18 in any other employment for wages or other compensation 58 per week with average for year 56 per week), Michigan (under 18, 54 per week 10 per day) Minnesota (under 16, 60 per week 10 per day), Mississippi (under 16, 58 per week 10 per day), New Hampshire (under 18, 58 per week 9 hours 40 min. per day), New Jersey (under 16, 55 per week 10 per day), New York (under 16 in factory 6 days per week 8 hours per day; under 16 in other occupations 54 per week, 9 per day; male 16 to 18, female under 21, 60 per week 10 per day), North Carolina (under 18, 66 per week), North Dakota (under 16, 60 per week, 8 per day), Ohio (male under 16, female under 18, 48 per week 8 per day), Oklahoma (under 16, 48 per week 8 per day), Oregon (under 16, 6 days per week 10 hours per day), Pennsylvania (males under 16, females under 18, 58 per week 10 per day), Rhode Island (under 16, 56 per week 10 per day), South Dakota (under 18 10 per day), Tennessee (under 16, 60 per week) and Wisconsin (under 18, in cigar factory 48 per week 8 per day; under 18 in any other, 6 days per week 10 hours per day).

To enumerate the many occupations prohibited to children in the various states would take too much space. The prohibited occupations to children of certain ages generally include the dangerous, injurious, unhealthy, acrobatic, mendicant, immoral, hazardous, standing, manufacturing, mercantile, mechanical, workshop, and many states have a general prohibition for any gainful employment (34.132). "The laws as to labor in mines are naturally more severe; although in some they are covered by ordinary factory laws (Colorado, Florida, Iowa, Kansas, Kentucky, Louisiana, Michigan, Minnesota, North Dakota, Oregon, South Carolina, South Dakota, Tennessee, Vermont, Virginia, and Wisconsin). Female labor is absolutely forbidden in mines or works under ground in Alabama, Arkansas, Illinois, Indiana, Missouri, New York, North Carolina, Oklahoma, Pennsylvania, Utah, Washington, Wyoming and West Virginia—in short, in most of the states except Idaho, Kansas, Iowa, Kentucky, Virginia, Wyoming, where mines exist; and the limit of male labor is usually put at fourteen (Alabama, Arkansas, Idaho, Indiana, Missouri, Ohio (fifteen during school year), South Dakota, Tennessee, Utah and Wyoming), to sixteen (Illinois, Missouri (of those who can read and write), Montana, New York, Oklahoma, Pennsylvania and Washington); or twelve (North Carolina, South Carolina and West Virginia), even in states which have no such legislation as to factories. The laws as to elevators (Indiana, Massachusetts, New York, Rhode Island, Kansas and Oregon), dangerous machinery (Connecticut, Iowa, Missouri, Oregon, Louisiana and New York), or dangerous employment generally (Illinois, Kansas, Kentucky, Massachusetts, Michigan, Minnesota, Missouri, Montana, New Jersey, New York), Ohio, Oklahoma, Pennsylvania, and Wisconsin), are even stricter, and as a rule apply to children of both sexes; the Massachusetts standard being, in the management of rapid elevators, the age of eighteen, in cleaning machinery in motion, fourteen, etc.; sixteen to eighteen in Indiana, Iowa, Louisiana, New Jersey, New York and South Carolina. The labor of all women in some states, and of girls or women under sixteen or eighteen in other states, is forbidden in occupations which require continual standing Illinois (under sixteen), Michigan (all), Minnesota (sixteen), Missouri (all), New York (sixteen), Ohio (all), Oklahoma (sixteen), Wisconsin, sixteen), Colorado (all over sixteen). Females in Iowa, Louisiana, Michigan, Missouri, New Hampshire, New York, Vermont, Washington (except wife of the proprietor or a member of the family), or minors in Arizona, Connecticut, Georgia, Pennsylvania, Idaho, Maryland, Michigan, Missouri, New Hampshire, South Dakota and Vermont, or young children in Florida, Illinois, Massachusetts, Missouri and Nebraska, are very generally forbidden from working or waiting in bar-rooms or restaurants where liquor is sold, and in a few states girls are prohibited from selling newspapers or acting as messengers (New York, Oklahoma and Wisconsin). The Northern States have a usual age limit for the employment of children in ordinary theatrical performances, and an absolute prohibition of such employment or of acrobatic, immoral, or mendicant employment. But in some states it appears that there is only an age limit as to these (California, Kentucky, Maine, Maryland, Michigan, Missouri, Montana, New York, Oregon, Rhode Island, (sixteen years); Colorado, District of Columbia, Florida, Illinois, Kansas, New Hampshire, Virginia, Wisconsin, Wyoming (fourteen); Connecticut, Georgia (twelve); Delaware, Indiana, Louisiana, Massachusetts, West Virginia (fifteen); Minnesota, New Jersey, Pennsylvania, Washington (eighteen). The hours for railroad and telegraph operators are limited in several states, but rather for the purpose of protecting the public safety than the employees themselves (Colorado and New York). The following other trades are prohibited to women or girls: Bootblacking or street trades generally (District of Columbia and

Wisconsin); work upon emery wheels, or wheels of any description in factories (Michigan); and in New York no female is allowed to operate or use abrasives, buffing wheels, or many other processes of polishing the baser metals, or iridium. Selling magazines or newspapers in any public place, as to girls under sixteen (New York, Oklahoma, Wisconsin), public messenger service for telegraph and telephone companies as to girls under nineteen (Washington)" (39.225,-6).

(20) Rights of the Child

"Legislation always means an attempt to define and express rights which society is ready to recognize, guarantee, and make universal in their application. Among the more important rights of childhood that are now generally given legislative protection are: (1) The right to be well born. (2) The right to parental name, support and protection. (3) The right to leisure, play, and recreation. (4) The right to education. (5) The right to exemption from work, until physically and mentally equipped for the specific tasks with which the work life may properly begin, and, for a longer period the right to protection from any temptation to enter upon extra-hazardous or dangerous trades or to work under conditions inimical to health and morals. (6) The right to protection from inhumane treatment. (7) The right to protection of health and morals. (8) The right to a chance in a decent environment, both physical and social, when guilty of any infraction of the law" (36.621). Most of these rights have been discussed in the preceding pages There are many other privileges and disabilities that the law confers. In Oliver vs. Houdlet, 13 Mass., 237, Justice Wilde said, "In all cases the benefit of the infant is the great point to be regarded; the object of the law being to protect his imbecility and indiscretion from injury, through his own imprudence or by the craft of others." "Hence, although the infant may avoid his contract, yet it is binding on a person of full age who contracts with him. Every person deals with an infant at arm's length, at his own risk, and with a party for whom the law has a jealous watchfulness" (46.10). Some contracts bind the infant, or minor as we shall call him henceforth. A minor's contract to marry, his contract for necessaries for himself or his wife and children, and his contract to enlist seem to be binding. The prices he will have to pay for necessaries, will not be what the merchant charges but what the necessaries are reasonably worth. "Of course food, clothing and house rent, especially if the minor is a young man who is married, are necessaries. Dentist's bills for filling teeth, and even a watch and chain, have been judicially held to be necessaries for certain well-to-do lads, who, after running up these bills, refused to pay them. More unhandsome still was the conduct of the youthful Kentucky bridegroom who tried to elude payment for his wedding suit of clothes, on the ground that it was a luxury and not a necessity. But he, and the young Englishman who bought a wedding present for his bride and then tried to escape paying for it, found that the jury considered these things necessaries and not luxuries. On the other hand, cigars and tobacco, wine suppers, and diamond and ruby cuff-buttons worth $60 apiece, are held in law to be luxuries, and in no possible way necessaries for any minor; not even for fashionable young men in college who wish to lead their 'set'" (15.84-5). The safest rule in business transactions seems to be for the adult to deal with the minor's parent or guardian. Of course a minor can take and hold property of all kinds during minority but the vendor or grantor is usually liable to have the minor refuse to confirm the sale or conveyance on attaining full age. There are so many conflicting decisions on this whole subject that "the layman, who is his own lawyer usually has a fool for a client." What has been said on this topic applies to the minor, who has property in his own name and who is not living at home. Ordinarily, if the minor has property of his own and his father is not so fortunately circumstanced, the minor's support can be made a charge on the minor's property. But this whole subject has been so diversely regulated by statute that it seems impossible to frame a short rule that will be found universal. The husband or father who fails to provide reasonable support and maintenance for his wife and minor children can be punished by a fine (in Massachusetts and other states payable to the wife) or imprisonment.

The child adopted is usually not related by nature to those assuming the legal relations of maternity or paternity, and "the consent of the child or other person to be adopted must in most states be obtained if such person be over fourteen years of age or over twelve years in the states of New York, California, Nevada, the Dakotas, Idaho and Arizona. Generally any woman being an inhabitant of the state and twenty-one years of age may adopt. The adopter must be forty years of age in Louisiana; competent to make a will in Iowa. If the adopter has a wife or husband, he or she must consent or join in the petition or other instrument, if competent, in the states of New Hampshire, Massachusetts, Maine, Vermont, Rhode Island, Connecticut, New York, New Jersey, Ohio, Illinois Michigan, Wisconsin, Minnesota, Delaware, Kentucky, Missouri, California, Oregon, Nevada, Colorado, Washington, the Dakotas, Idaho, Utah and Louisiana. In Massachusetts and Louisiana the person adopted must be younger than the person adopting; and it must be a child in the States of New Hampshire, Maine, Rhode Island, Pennsylvania, Illinois, Wisconsin, Minnesota, Nebraska, Delaware, Missouri, Oregon, Nevada, Colorado, Utah, Alabama, Florida, Louisiana, and the Territory of New Mexico. No woman can adopt her own husband in Massachusetts; or her own child in Illinois, Wisconsin, Iowa, Minnesota and Washington; a brother or sister, whether of the whole or half blood, or an uncle or aunt in Massachusetts; nor in Louisiana can a man adopt his illegitimate children, whom the law prohibits him from acknowledging. By the law of the state of Nevada no mongolian can either adopt or be adopted. It would seem by the law of Illinois that only an orphan can be adopted, or a child both of whose parents have deserted it for at least one year. In New Jersey, Idaho, and Louisiana the person adopting must be at least fifteen years older than the person adopted, and at least ten years older in California, Nevada, and the Dakotas. In North Carolina an adoption may be made either for life or during the minority of the child (5.50-2).

A digest of the apprentice laws of the states will be found in "The apprenticeship System in its relation to Industrial Education" by the late Carroll D. Wright, President of Clark College, Worcester, Massachusetts, United States Bureau of Education, Bulletin, 1908, No. 6. (47.) "Besides the general power of a parent to bind his infant child as an apprentice, an orphan whose estate is insufficient for his support, or an infant pauper, whether an orphan or not, may be apprenticed by the overseers of the poor or other similar officers" (11.3.542). In some jurisdictions, as in New York, an infant may bind himself, while in others this power is denied. The usual rule is to require the child's consent to his apprenticeship.

In the United States the child's capacity to make a will is looked upon with disfavor according to the following: "Modern legislation repudiates largely the wills of all infants, male or female, with obvious disfavor. And the latest enactments of the majority of American states are to the same purport, establishing the age of twenty-one as that at which a person of either sex ceases to be disqualified from making a will of either real or personal estate. States still vary in provisions, however, concerning the testamentary capacity of infants. Eighteen years is sometimes taken as the testamentary age for both males and females; while various codes adopt a still earlier standard of discretion, distinguishing in some instances between males and females, or even between females married and unmarried. Sometimes, too, the line is drawn between the kinds of property, so that an infant's personality but not his real estate may be disposed by testament before he reaches the age of twenty-one" (33.21).

The code of Georgia, Seventh Title, Chap. 2, Art. 1, 3265 reads "Infants under fourteen years of age are considered wanting in that discretion necessary to make a will." In New York, a female at 16 and a male at 18 can dispose of their personal property by will.

(21) RIGHTS OF PARENTS

The parents have the natural right to the control and custody of the child. The common-law rule was that the father's right to custody of a legitimate child was superior to that of the mother. But the common-law rule has been modified in most, if not all, states. "General rules cannot be laid down for the determination of cases affecting the custody of infants, there can be no legal standard by which the courts must be governed. The general result of American cases may be characterized as an utter repudiation of the notion that there can be such a thing as a proprietary right or interest in or to the custody of an infant. The terms "right" and "claim," when used in this connection, according to their proper meaning, virtually import the right or claim of the *child* to be in that custody or charge which will subserve *its* real interest" (20.22). Colorado, Connecticut, Idaho, Kentucky, Maryland, Massachusetts, Minnesota, Mississippi, Montana, New Hampshire, New Mexico, New York, Ohio, Oklahoma, Rhode Island, South Dakota, Texas, Vermont, Washington and Wisconsin allow a married woman to be appointed guardian of her own or other people's children, to have charge of their persons and property, even though she lives with her husband. In Arkansas, Missouri and Utah, she can be appointed guardian of a child's person only and in California of its estate. In New Jersey she and her husband may be jointly appointed (15.91). Statutes in every state provide for the support of the child by the parent, and when the child is an orphan, statutory provision exists in some states for his support by the grandparents, if they have sufficient means. The marriage of a minor daughter excuses her father from supporting her as that is one of the duties assumed by her husband. In all cases where a child has property, the parent before using the property, even for the child's benefit, should apply for permission to the proper court. If the parents have custody of the child, the child's earnings belong to the parents. "Under some statutes the parent, if he intends to claim the child's earnings, must notify the child's employer, and in absence of such notice payment to the child is valid and he has good title to the money" (11.29.1624). The parent may emancipate the child by "giving him his time," and "the effect of this is to throw the child upon his own exertions for support and legally absolve the father from further obligation" (15.76).

Religious Convictions. The peculiar religious convictions of a father form no ground for removing the child from his custody, nor does a father forfeit his right to custody of his child by being or becoming an atheist. But where a father belongs to a sect which entertains opinions, obnoxious to society, adverse to civilization, opposed to the usage of christendom, and in some respects contrary to the express commands of the Bible, the court will not award him the custody of the child. In determining the custody of a child as between persons other than parents the court regards its temporal welfare as paramount to questions of religious doctrine; but the child will be delivered to the custody of persons of its father's faith if its temporal interest will be as well conserved by the custody of such persons as by that of others of a different faith or indifferent in religious matters" (11.29.1600).

(22) MAJORITY

At common law all persons under twenty-one are infants or minors but this rule has been modified in some states by statute. The age of majority in some states is eighteen years for married females while in other states eighteen is the age of majority for all females, and in Utah all minors attain majority on marriage. Provisions in some states are made whereby a minor can be relieved of legal non-age by the court. The statutory provisions as to majority follow: Alabama (21, except married females; over 18 may be relieved of non-age by the court), Alaska (21 except "all female persons when married according to law"), Arkansas (males 21, females 18), Arizona (males 21, females 18), California (males 21, females 18), Colorado (males 21, females 18), Connecticut (21 for all persons), Delaware (21 for both sexes), District of Columbia (males 21, females 18), Florida (21 non-age may be removed by court over 18), Georgia (males and females 21), Idaho (male 21, female 18), Illinois (male, 21 female 18), Indiana (21), Iowa (male 21, female 18, and also attains majority by marriage), Kansas (21 male, and female 18), Kentucky (21,)Louisiana (21), Maine (21), Maryland (males 21, females for most purposes 18), Massachusetts (21), Michigan (21), Minnesota (males 21, females 18), Mississippi (21), Missouri (male 21, female 18), Montana (males 21, females 18), Nebraska (males 21, females 18), marriage ends minority of female), Nevada (male 21, female 18), New Hampshire (both sexes come of age at 21), New Jersey (21), New Mexico (21, guardianship over both ceases on marriage), New York (21), North Carolina (21), North Dakota (males 21, females 18), Ohio (male 21, females 18), Oklahoma (males 21, females 18), Oregon (males 21, females 18), Pennsylvania (21), Rhode Island (21), South Carolina (21), South Dakota (males 21, females 18), Tennessee (21), Texas (21, females 18 also becomes of age on marriage), Utah (males 21, females 18, all minors attain their majority on marriage), Vermont (male 21, female 18), Virginia (21 for both or when female marries), Washington (males 21, females 18), West Virginia all persons (21), Wisconsin (males 21, married women over 18), Wyoming (males 21, females 18 or until they marry).

(23) SUMMARY

1. Federal legislation seems to be chiefly concerned with the alien child. Professor Stimson intimates that the Constitution may have to be amended to make Federal legislation possible (39.215).

2. Each state legislates for the children within its jurisdiction, and there is a wide diversity in the child-laws of the states.

3. It seems to be legally settled "that the legislature must be the sole judge of the expediency of such legislation" (39.215); and "the state is the ultimate parent of the child."

4. Parents and children have been deprived of their natural rights through the legislation of some states. "Indeed, in some Western states it would appear that the general disapproval of the neighbors of the method employed by parents in bringing up, nurturing, educating or controlling their children, is sufficient cause, for the state authorities to step in and disrupt the family by removing the children, even when themselves unwilling, from the home to some state or county institution. Any one who has worked much in public charities and had experience with that woeful creature, the institutionalized child, will realize the menace in such legislation" (39.337-8).

5. The laws on marriage and divorce are not uniform throughout the states.

6. No state has laws regulating the employment of pregnant mothers.

7. Nine states have no laws on the practice of midwifery.

8. Sixteen states have laws requiring cases of ophthalmia neonatorum to be reported. In Connecticut midwives and nurses are liable to a fine of $200 or imprisonment not to exceed six months or both for failure to report in writing within six hours to health officers the fact that one or both eyes of a child has become inflamed, swollen or reddened at anytime within two weeks after birth.

9. The Pennsylvania law relative to vital statistics has been adopted by twenty states and should become universal in this country.

10. The legal status of the illegitimate child closely approximates that of the legitimate child in some states.

11. The New Jersey law on "certified milk" is most comprehensive. (State of New Jersey, Laws of 1909.)

12. Seven states have no compulsory education law. "Throughout almost the entire United States some school attendance is compulsory from 7 or 8 years of age to 14" (36.1.293). Thirty-five states impose penalties on parents for neglect to comply with the compulsory education law.

13. Some states have certain laws, as for example school laws, that minimize the functions of the home, but also emphasize parental responsibility through penalizing provisions.

14. There is a tendency to coddle the child in some states and the absolute prohibition of corporal punishment in schools seems to be illustrative of the tendency.

15. Thirteen states have legal provisions on medical inspection of schools. Four are compulsory laws. They are the laws of Colorado, Massachusetts, New Jersey and Indiana (refers to Indianapolis only). The New Jersey law compels parents to remedy defects. Connecticut provides for the employment of school nurses.

16. The District of Columbia and seven states seem to have no laws on abandoment, desertion and non-support. Michigan has a law that provides if the parent is imprisoned, his earnings if any shall be paid to the family.

17. Sixteen states seem to have no laws regulating exhibitions and employments (not child-labor) of children.

18. Three states seem to have no laws on the publication or sale of obscene literature to children.

19. The District of Columbia and seven states are reported as having no laws governing the admittance of children to resorts.

20. The sale of intoxicants to children is prohibited generally throughout the country.

21. Ten states prohibit the manufacture and sale of cigarettes and cigarette papers. Massachusetts and other states prohibit the sale or gift of cigarettes to minors under eighteen years of age; at least fourteen states prohibit sale of tobacco, in any form, to minor under 16, and Kansas prohibits the sale of tobacco, opium or narcotic in any form to a minor under twenty-one years of age.

22. The legal age of consent to carnal intercourse for a female child varies from ten years in one state to eighteen years in thirteen states.

23. Twenty-three states have enacted Juvenile Court Laws. In the great majority of the states the jurisdiction of the Juvenile Court extends to children of 16 or 17 years of age; in two states to boys 17 and girls 18; in three states it is 18 for both; and in one state 19 for both. In 19 states and the District of Columbia parents or others contributing to the child's delinquency may be punished by a fine or imprisonment.

24. Nevada is the only state without child labor laws. Nineteen states forbid employment of children under 14 in factories, stores, offices, laundries, hotels, theatres and bowling alleys. In six states the labor of a child under 16, in 18 states of a child under 14 and in 8 states of a child under 12 in mines is forbidden. Twenty-three states forbid employment of children during school hours. Night work is prohibited in 23 states under 16, in 7 states under 14 and 2 states under 12. Legislation is tending to prohibit the industrial employment of a child under sixteen.

25. Tendencies that are common in the legislation of a group or groups of states have been noted already in these pages. Broader inferences at this time seen unwarranted.

26. Some states have laws that are inoperative because the legal machinery for their enforcement is lacking; other states, though legally well equipped, are not enforcing laws on their statute books. In every community much depends on the men behind the law. An automatic law has not been discovered in this study.

27. A common result of a disaster or a grave scandal is a new law, which is sometimes so necessary that the wonder is that its need was not met by earlier remedial legislation. Preventive laws should be enacted before great expenditure of life, health or morals make legislation imperative. When a National Children's Bureau is established in this country, preventive legislation will receive deserved attention. Apart from the laws relating to birth registration, midwives, ophthalmia neonatorum, milk, and medical inspection, strangely few preventive laws were found in the legislation of the states.

(24) SUGGESTIONS

To be an American citizen in this year of our Lord, one thousand nine hundred eleven, is the greatest privilege on earth—except one, that of the American child, the American citizen of to-morrow. The words of Dr. McCoy, who has given over thirty years to both study and practical work in child-welfare, follow: "Have you ever given a moment to this great thought? The young people of America are the heirs to all the values of the ages, and what a marvellous heritage that is. They are of a certainty, too, the men and women of destiny. In their hands in a short time will be all the interests of life and those that concern eternity. Religions, system of government, the armies and navies of the world that even now are shaking earth and sea and sky in thunderous throwing of the 'grim dice of the iron game,' the ceaseless breathings of the mighty engines of our industries, the passing ships of commerce, swift almost as the lightning from shore to shore, the courts, the schools, the philosophies, the arts, literature, the knowledge of natural forces and the power of their application—all will be theirs.

"The old or the middle-aged either have finished or are putting the last touches to their life-work. They are up or over the mountain and are going down into the soft glory of the sunset; but the young with glad shout are breasting the eastern hills with all the radiance of a new morning in their eyes and with the fires of a new purpose glowing in their hearts.

"And they must be fitted for their mission. For this reason the citizens come and deliberate together; for this reason they pile the public gold whereby to raise the school walls; for this reason they call scholarly men and women to guide and rule; for this reason have the book presses been groaning in labor this many a year; and for this reason are eager searches of enlightenment going down to the sea, and into the earth, and up in the sky, seeking new truths to bring back for their betterment" (30.11-12).

1. The first suggestion, the need of systematic legislation for children, will not meet with much opposition. Almost every one acknowledges the need of systematization which will preclude "crank laws" and make for sanity in child legislation.

2. The question how legislation for the children of the United States may be systematized is unsolved. The Federal right to legislate for the children of the several states is questioned under the present constitution. Until the Federal right is established by judicial decision or legislative amendment to the constitution, expediency must devise other methods.

A National Children's Bureau, which will do for the entire field of child-laws what the United States Bureau of Education is doing for school-laws, seems essential.

3. And a National Association for Child Legislation would be of inestimable assistance in the solution of the problem. Such an organization might serve to correlate the many independent organizations now urging child legislation. The union of the existing organizations would make a National

Association for Child Legislation a sturdy infant from birth, and the propaganda of the present organizations should become more effective throughout the entire country. A National Association for Child Legislation must be democratic. In this country no organization can succeed permanently and be controlled by any aristocracy—not even an aristocracy of learning. The success of the American Association for Labor Legislation, in one of its chosen fields, that of child-labor, might be studied to advantage by a National Association for Child Legislation.

4. To maintain even the semblance of the primacy of the home, legislation, that minimizes the functions of the home, should also emphasize the responsibility of parents. In some jurisdictions this tendency appears in the school laws and juvenile delinquency laws penalizing parents. It is a principle that should be kept in mind in child-legislation. Dr. Burnham writes: "A few pretty definite practical principles follow from this idea of the primacy of the home in education. They are enforced, too, apparently by the teachings of experience. We may formulate them as follows:

"First, the aim of school education is to supplement the education of the home.

"Second, the best of institutions is a poor substitute for a good home. Other things being equal, put the delinquent or neglected child in a home rather than a school.

"Third, charitable institutions are likely to be successful in the degree in which they approximate in their management the conditions of home life.

"Fourth, schools and other institutions should not as a rule usurp functions that belong to the home. In case this is desirable, it should be done in such a way that it will not be permanently necessary to do so.

"Fifth, teachers should always recognize the authority, the responsibility, and the general expert character of parents in the education of their own children. The numerous exceptions to this can be treated all the better by one who recognizes this general truth. On the whole, perhaps we may say that parents are not much more inefficient than we teachers, and certainly we can learn much from a child's parents in regard to the best methods for his education.

"Sixth, for the child's misdemeanors the parents as well as the child should be held responsible. This is coming to be recognized in child legislation, as, for example, in the Colorado law." (8.487.)

5. The welfare of the child and the parents demand that the home shall not be eliminated except as the last resort. The Pennsylvania Society is another that has come to share

''the modern economic thought that the normal condition of the child is in the home, even though the home be a poor one; the children often help their parents to reform, and the father and mother can in many cases be made to realize and feel . . . that upon them is the burden of responsibility to see that their children do not become in any sense a charge upon the community. Its belief in this theory is evidenced by the fact that in the year just closed 1,522 cases have been 'passed' over to what is technically known as 'supervision' cases, in which, perhaps, on the first visit the breaking up of the family seemed justifiable. Endeavors have, therefore, been made in every case to preserve the family as a whole. The results obtained by the visitors and agents in this work of reconstruction have been beyond belief" (31.143). And Dr. Chamberlain adds the following: ''Indeed whatever can create a home environment, or something closely approximating to it, must be beneficial, as it is the most human method of 'reform' or 'regeneration'" (9.1.629).

6. As well intentioned but over-indulgent parents sometimes rear "the spoiled child," legislation that tends to coddle the child should be discussed for at least a year before its enactment.

7. The report of the Committee of the Commissioners on Uniform State Laws Entitled "An act relating to and regulating marriage and marriage licenses; and to promote uniformity between the state in reference thereto" (1.1130-1153), should be read by every legislator.

8. The recommendations of the Commissioners on Uniformity relative to migratory divorce and to divorce procedure and divorce from the bonds of marriage are deserving of serious consideration (39.323-324).

9. The "Act relating to desertion and non-support of wife by husband, or of children by either father or mother, and providing punishment therefor; and to promote uniformity between the states in reference thereto" (1.1179-1181), provides in Sec. VII for the payment "for the support of such wife, child or children, a sum equal to . . . for each day's hard labor performed by said person (the husband or father) so confined," and is an act that seems worthy of adoption throughout the Union.

10. Some statutory provision should be made in all states relative to the employment of mothers before and after childbirth.

11. Legislation should be enacted making it criminal to advertise any illegitimate child for adoption without first receiving permission from the State Board of Charity.

12. The school age should be raised so that any child under seventeen, who is neither attending school regularly or working, could be required to attend some school. Industrial schools or special schools would be required for this class. While statistics from a single city are far from establishing a norm, the writer's study of Juvenile Delinquency in Worcester, Massachusetts, may be of interest in this connection.[1] From June 1, 1907, to April 1, 1910, sixty-five per cent. of the boys and sixty-eight per cent. of the girls arrested for delinquency were between fourteen and seventeen years of age. There were 493 boys and 32 girls. Of the boys, 67 were attending school, 191 were working, and 236 or 49.7% were neither attending school or working, "just loafing around." Among the girls 22 girls or 68.7% were also "loafing," 9 girls were working and only one girl in the group was attending school. Both the boys and girls who were "loafing" were before the court for the more serious offenses.

Relative to the need of day truant schools in this country, in the same study 85% of the Worcester boys and girls in the Lyman School at Westboro and the State Industrial School at Lancaster stated that a connection existed between their own truancy and their own delinquency; and the majority of delinquents of school age studied were also truants.

13. Each child attending school should receive a physical examination at least once a year under the direction of an occulist, aurist, physician and dentist, and legislation should be enacted compelling parents to take reasonable remedial measures.

14. Laws should be amended to enable authorities to have supervision over all female school offenders until their majority is reached. In some jurisdiction this class of girls must be released at the age of fourteen and they return to environments that are sometimes especially dangerous at that age. These girls are really "neglected children." Relative to this age, President Hall writes: "In fine, puberty for a girl is like floating down a broadening river into an open sea. Landmarks recede, the water deepens and changes in its nature, there are new and strange forms of life, the currents are more complex, and the phenomena of tides make new conditions and new dangers. The bark is frail, liable to be tossed by storms of feeling, at the mercy of wind and wave, and if without chart and compass and simple rules of navigation, aimless drifting in the darkness of ignorance, amidst both rocks and shoals, may make of the weak or unadvised, wrecks or castaways" (17.507-8). Again President Hall says, "Caldo

---

[1] Juvenile Delinquency in Worcester, Massachusetts, by Thomas C. Carrigan, No. 54, 562, Library Clark University, Univ. Case C. 316.

finds that most prostitutes fall between the ages of fifteen and eighteen, which he terms the period of sexual vulnerability toward which chief effort should be directed." (17.431.)

15. Parents, when of sufficient means, should pay a reasonable amount for the support of their delinquent children confined in corrective State Institutions.

16. Superintendent of Institution, Chief of Police, Superintendent of Schools and Juvenile Probation Officer of the child's city or town, or a majority of them should have power at any time to release from any corrective institution any child not committed for a felony.

17. In order to give an opportunity to the working public, which is unable without loss of pay to meet the school authorities during the day, legislation should require the following offices in all cities to be open at least one evening in each week:

(1) Office of the superintendent of schools
(2) Office of the truant officer
(3) Office of the principal of all large grammar schools.

18. To better acquaint the teacher with the child's disadvantages out of school, legislation should provide that each teacher should be allowed to visit, *during the hours school is in session*, the home of each pupil at least once a month during the school-year. Teachers, generally, are overworked and underpaid, and the writer would be the last to suggest the imposition of another "fad." The suggestion on this page was born from investigating the unheralded and noble work of a woman principal. That her visits to the homes of her pupils have unmeasureably benefited both pupils and parents, many can testify; and that her teaching has steadily gained in common-sense tempered by sympathetic insight is the report of an expert, the writer has not the honor of her acquaintance. The divorce of the school and home is almost absolute in many places. Rarely any mother visits the school except to discuss discipline in some extraordinary case. Fathers are seldom visitors, and that is not surprising when it is remembered that most fathers would have to lose a part of a day's wages to visit school. The home and school are strangers too often as far as parents and teachers are concerned. This suggestion aims at making parents and teachers acquaintances, and then friends, in hope that both will mutually profit.

19. Records of all absences without excuse should be kept by every principal.

20. Every principal should be supplied with the name, age and address, and the school attending of every child of school age in his district.

21. Co-operation of school and police departments on truancy seem advisable in some places..

22. A juvenile census should be taken annually in cities and towns.

23. Every city should establish a free employment bureau for the purpose of securing positions for children above the school age, who need employment. To-day much is being said and written about vocational training. In most cities, when the working boy and girl, no matter how deserving, leave school, they must find their own positions and they generally take what they can get. This tends to make "misfits." The suggested bureau could have on file the names of employers in shops, stores, etc., who want worthy young people in their establishments. Think of the moral lever that the recommendation of such a bureau might be to the minds of the older school children, who are looking forward to "a good job." If diplomas, medals, etc., have been effective in moral education, it seems that the prospect of "a good job" at the end of school-life might be made at least as potent with the American child.

BIBLIOGRAPHY

The first citation, on page 1, is followed by these figures (19.2.298), which are to be interpreted:—19. Hoar, George F. Autobiography of Seventy Years. 2. Volume II. 298. Page 298. This will serve as a key to the other references.

1. American Bar Association. Report of the 33rd Annual Meeting, Baltimore, 1910. 1197 p.
2. American and English Encyclopedia of Law. Northport, Long Island, N. Y., 1896. 31 volumes.
3. BAKER, HARVEY H. What constitutes a neglected child under the Massachusetts Statutes. Boston, 1911. Address. 8 p.
4. BARDEEN, C. W. A Manual of Common School Law, Syracuse, N. Y., 1910. 496 p.
5. BAYLES, GEORGE J. Woman and The Law. New York, 1901. 274 p.
6. BLACK, HENRY C. Handbook on the Construction and Interpretation of the Laws. St. Paul, Minn., 1896. 499 p.
7. BLACKSTONE, SIR WILLIAM. Commentaries on the Laws of England (Sharswood's Edition). Philadelphia, 1875. 2 volumes, 531 p., 739 p.
8. BURNHAM, WILLIAM H. The Home in relation to the other Factors in Education. *The Pedagogical Seminary*, December, 1909. Volume XVI, No. 4, pp. 485-91.
9. CHAMBERLAIN, ALEXANDER F. Criminality in Children. Monroe's Cyclopædia of Education, Volume I, pp. 625-30. New York, 1911.
10. CLARK, HANNAH B. Sanitary Legislation affecting Schools in the United States. U. S. Commissioner's Report, 1893-4, Volume 2, Chapter X, pp. 1300-1349.
11. Cyclopedia of Law and Procedure. (Cyc.) Volume I (published 1901). Volume XXXVI (published 1910). 4 volumes forthcoming. The American Law Book Company, New York.

12. Dwight, Edwin W. Medical Jurisprudence, Philadelphia, 1903, 249 p.

12a. Dutton and Snedden. The Administration of Public Education in United States, New York, 1908, 598 p.

13. Ewell, Marshall D. A Manual of Medical Jurisprudence (Second Edition), Boston, 1909, 407 p.

14. Gray, John C. The Nature and Sources of the Law. New York, 1909. 332. p.

15. Greene, Mary A. The Woman's Manual of Law. Boston, 1902. 284 p.

16. Gulick and Ayers. Medical Inspection of Schools. New York, 1908. 276 p.

17. Hall, G. Stanley. Adolescence, Its Psychology and its Relations to Physiology, Anthropology, Sociology, Sex, Crime, Religion and Education. New York, 1904. 2 volumes, 589 p. 784 p.

18. Hart, Hastings H. Homer, Thomas J. Abbott, Grace. Juvenile Court Laws in the United States. Summarized, New York, 1910. 150 p.

19. Hoar, George F. Autobiography of Seventy Years. New York, 1903. 2 volumes, 434 p. 493 p.

20. Hochheimer, Lewis. The Law Regulating the Custody of Infants. Baltimore, 1899. 148 p.

21. —— ——. Manual of the Maryland Society for the Protection of Children. Baltimore, 1909. 28 p.

22. Holmes, O. W., Jr. The Common Law. Boston, 1881. 422 p.

23. Illinois State Board of Health. Summary of the Laws and Regulations Governing the Practice of Medicine in the States and Territories of the United States, Monthly Bulletin, October, 1910. 402-31 p.

24. International Labor Office. Quarterly Bulletin, American Association for Labor Legislation, John B. Andrews, Secretary, Metropolitan Tower, New York City.

25. Keezer, Frank. The Law of Marriage and Divorce (with a synopsis of the Statutes of the various States). Boston, 1906. 609 p.

26. Kelley, Florence. On some Changes in the Legal Status of the Child since Blackstone. The International Review. August, 1882, pp. 83-95.

27. Lee, Guy Carleton. Historical Jurisprudence. New York, 1900. 517 p.

28. Lewis, John. Sutherland's Statutes and Statutory Construction (second edition). Chicago, 1904. 2 volumes, 603 pages, 1416 p.

29. Loeb, Isidor. The Legal Property Relations of Married Parties. New York, 1900. 200 p.

30. McCoy, John J. The Playground Movement. The Catholic Educational Review, Brookland, D. C. Volume I, No. I. January, 1911. pp. 10-23.

31. McRea, Roswell C. The Humane Movement. New York, 1910. 444 p.

32. Monroe, Paul. Cyclopædia of Education. Volume I, New York, 1911. Compulsory Attendance, etc.

32a. Morris, M. F. An Introduction to the History of Development of Law. Washington, 1909. 315 p.

33. Schouler, James. Laws of Wills and Administration. Boston, 1910. 648 p.

34. Scott, Laura. Child Labor—Summary of Laws in force in 1910. Legislative Review, No. 5. American Association for Labor Legislation. New York, 1910. 139 p.

34a. Shields, Thomas E. The Making and Unmaking of a Dullard. Washington, 1910. 296 p.

35. SNEDDEN, DAVID S. Administration and Educational Work of American Juvenile Reform Schools. New York, 1907. 206 p.
36. —— ——. - Compulsory Attendance, Monroe's Cyclopædia of Education, Volume 1, New York, 1911. 285-95 p.
37. STIMSON, FREDERIC J. American Statute Law. Boston, 1886. 2 volumes, 779 p. 622 pages.
38. —— ——. American Statute Law. First Supplement, Boston, 1888. 122 pages
39. —— ——. Popular Law-making. New York, 1910. 390 p.
40. SWETT, MAUD. Summary of Labor Laws in Force, 1909, Woman's Work, Legislative Review, No. 4. American Association for Labor Legislation, New York, 1910. 16 p.
41. TAYLOR, HANNIS. The Science of Jurisprudence. New York, 1908. 676 p.
42. The American Medical Association. The Present Situation in Vital Statistics Legislation (with model bill on vital Statistics). Bi-monthly Bulletin, Volume 6, No. I, September 15, 1910. Chicago. 31 p.
43. The American Medical Association. Report of the Committee on Ophthalmia Neonatorum. Journal of the American Medical Association, Volume 52, p. 2047-2056, Chicago, June 19, 1909.
44. UNITED STATES COMMISSIONER OF EDUCATION. Report for year ended June 30, 1910. Washington, 1910. Volume I, 622 p.
45. WILBUR, CRESSY L. Report of Committee on Birth Registration, Proceedings of the American Association for Study and Prevention of Infant Mortality. Baltimore, 1910.
46. WILCOX, S. M. Legal Rights of Children, United States Bureau of Education, No. 3. Washington, 1880. 96 p.
47. WRIGHT, CARROLL D. The Apprenticeship System in its Relation to Industrial Education. United States Bureau of Education. Bulletin No. 6. Washington, 1908. 116 p.

THE PLACE OF REASONING IN TEACHING

By John A. Hancock, State Normal School, Mankato, Minnesota

A study of the history of communities shows that development has proceeded very largely along lines conditioned by the problems confronting the people. The colonist came to America to solve certain problems. Others promptly confronted him demanding solution whether he would or not. Among these were the problems of food, shelter, clothing, government, labor, and relations with the Indians.

Solving these led to the acquisition of much valuable knowledge and raised other problems more numerous still. Out of the stimuli supplied by these problems came much knowledge of the geography of the country, its resources of animal and plant life, the peculiarities of its climate, and the habits and methods by which the Indians solved their problems. The problems of food and clothing led to the establishment of industries in the homes and to the many problems connected with these; to the problems of the farm and village; and to devising ways and means for their solution.

We may study the lives of these people from many different points of view. The geographical conditions must be understood if their activities are to be understood. Mathematics can give another point of view of their activities. In the field of literature their pleasures and sorrows are viewed. History relates and explains the problems that arose and how they were solved. Art and music throw many sidelights on the periods studied. Sociology also has its way of looking at the same life and activities.

Most of the problems of life were solved in the individual homes at one stage. But there came a time when problems had increased to such an extent that specialization became a necessity. The same story is repeated over and over when one reads of the development of transportation, of farm machinery, and of machinery necessary for the home, office, mill, and factory. In each case there were one or more problems which, left unsolved, meant the increase of inconvenience, suffering, and expense. Often one problem solved seemed but to make more necessary the solution of others until necessity seemed to be like a demon never satisfied. Remarkable illustrations of this are numerous in the history of transportation and steam engineering.

It is interesting to note how the evolution of one machine has had far reaching results, notably in the case of the harvester. Instead of decreasing the amount of labor there has come a greater demand for *skilled* labor. The problem of the relations of labor and capital has become more complicated because of it. It has greatly influenced the problems of transportation, banking, milling, and the storing of the grain. Indeed problems political, social, industrial, and educational have all been complicated by the evolution of this machine. It is also true in regard to this machine as in the case of all others that there are yet some unsolved problems relating to it individually.

The evolution of various lines of business presents similar stages. In this it is interesting to note the lateness with which certain lines have developed. Those more necessary for the general welfare came first. Banking came very late. Its prosperity is conditioned by the prosperity of all of the others. It is to business what mathematics is to other fields of knowledge.

Other motives besides necessity have played a part in progress. Among these have been love of knowledge, curiosity, ambition, desire for fame, and service.

Finally progress has been conditioned by inheritance, environment, and the initiative of the people themselves. The play of these has presented a series of problems. These have always consisted in a more or less complicated situation, made up of facts, some of which are active forces of a greater or lesser degree of intensity, others are static, playing little or no part in the working out of the situation.

It has been quite impossible to tell when problems of a given period have been finally solved. Each generation has generally found the old ones arising, though under conditions somewhat changed, *e. g.*, the labor problem. Solutions with reference to the times have generally been necessary.

The value of any given solution has been conditioned upon the success with which it has met the imperfections and inconveniences that made up the problem. Readjustment to new conditions has often worked many hardships. This has meant the problem of the preservation of plasticity to a yet later period of life. Success in the solution of problems has proven an inspiration to further efforts, to persistence, self-confidence, and self-reliance.

If some application of these points is made to the existing methods of instruction there confronts us the current neglect of the significance of the problem in securing results. Fields of knowledge are presented as classified, organized, systematized, separated from each other, and with very few opportunities for other activities of mind on the part of the pupil than that of memory. It is not uncommon to find pupils in both school and college feeling that they have "finished" certain subjects. Many leave school because there is no future there visible to them. They do not know how to solve problems and they do not know any problems needing to be solved. Interest and inspiration have gone in consequence.

In the evolution of knowledge there have become necessary readjustment of habits, the formation of new associations and habits, the careful analysis of situations to be dealt with, the selection and reorganization of significant facts, the devising of ways and means to deal with them, the use of analogy, the generalization of laws, the discovery of the hidden principles explaining the more superficial law, and the use of principles and laws for guidance, explanation, and inference in dealing with the facts of situations. With the ever increasing body of knowledge have come a larger outlook and a greater facility in the use of mental powers.

One recognizes the foregoing as having been generalized as the method of science,—a method, however, by no means limited to the fields of science. Science recognizes first of all the presence of a problem, something about which thought must centre, something for which there is in the mind of the student a definite motive acting as an incentive for the solution of the problem. It is of this that the logics make no mention.

It is quite possible for one's first touch with a field of knowledge to lead to nothing more than a superficial acquaintance with the miscellaneous facts of the field. One may be interested in the beauties of the sunset, in the change of the foliage, in the surf at the seaside, and no question may arise in his mind in regard to the forces at work in either situation. Yet if actually confronted by a problem of either field which he must solve, his interest in that field may broaden and deepen. But interest often suffers arrest in the superficial stage.

With problems presenting themselves and demanding solution, progress is assured. In these it is, first, important to secure the facts of the situation clearly. This fact getting stage has often been designated as the descriptive or narrative stage. It may be either or both in a varying proportion.

In this the teacher's problem is one of inspiring pupils for the work, in directing the work, not, in doing it; in teaching the arrangement of facts, with due regard to action, color, interest, sequence, contrast, and the subordination of the less important.

Various errors are likely to be made in dealing with the fact stage. One may fail in exactness appropriate for the subject in hand, in the suitable degree of detail; and penalties for this failure may grow out of the results obtained and so make one more considerate in the future. Too great wealth in details may serve to obscure the important points in the situation.

A large majority of facts, laws, and principles must be taken at second-hand. Dependence upon others seems only likely to increase, and it therefore becomes important to establish standards and guiding principles for testing the reliability of testimony in whatever form it may be presented to us. Sooner or later people become chary about accepting all that the daily paper has to offer. Past experience has biased some writers on some subjects. Some writers have never learned the art of exact observation. Others seem never to have had any great regard for truth. We have little patience with the writer who evidently knows little about his subject, but much regard for the man well trained who offers information on subjects in his own field. The memory of the best in regard to a series of events of a dozen years since shows a strong tendency to confusion. Again gaps in the memory of a long gone series of events are likely to be supplied by the imagination, and hence the importance of memoranda made at the time of the events.

The terms observation and analysis need to be more carefully used. This, however, seems to be true of all of the terms used in connection with reasoning. To be a good observer does not mean the possession of an all-round power. One observes according to his interests, training and habits. The good observer sees facts in their significance. He is the better observer after careful training. Analysis seems to refer to the breaking up of a situation into its individual facts. In the early stages of a subject one needs to gather all possible facts that seem in any way associated with the subject in order to sift and determine what the important ones are.

The Analogy. No matter how young or how old one is, when he has passed through or is familiar with an experience of a given kind, he feels competent to some degree to deal with another of a similar kind. The first is suggestive for guidance, explanation, or inference, in the case of the second. Through the accumulation of experiences one begins to sense uniformities or laws without necessarily having any grasp of the forces producing these. It is perhaps difficult to draw the line between analogy and generalization. Very much of the world's thinking seems often to be done with reference to resemblance to some one experience. Generally speaking the analogy is concerned with but one past experience and one in hand. It is used very freely by both children and adults, often regardless of the fact that its unguarded use leads to many mistakes. It is necessary to consider the significance of the points of resemblance and difference. The second experience may vary from the first in only one point but the importance of that one may be so great as to prevent the first having any bearing on the second.

Generalization and Induction. Generalization refers to seeing and stating the fact or facts in common to a number of given situations or experiences. From this come definitions, laws, general notions, proverbs, etc. The value of the generalization may be great or small. It depends upon the generalization. This may be of some wholly passive fact in situations. It may be of coincidence. It may be of some feature that should always be taken into consideration, *e. g.:* a hot stove will burn; Mr. A. is always disagreeable before dinner; certain foods uniformly "disagree" with B., etc. In all of these the reasons for the uniformities may be wholly unapparent.

Induction is the search for the hidden forces producing the uniformity. The statement of the method by which these forces produce the result is the principle. There is much confusion of the use of law and principle. The value of knowing the hidden forces and their methods of work is often the value of life and property. Money could hardly have repaid Pasteur for his discovery of the means by which disease is spread. The need for the discovery of hidden causes arises in business, professions, industries, and indeed in all callings, and with great frequency. While children cannot be expected to rediscover every law and principle needed, it would seem that training in this kind of thinking ought to have a place in their school work.

Just how many illustrations are necessary before one should attempt to formulate his generalization whether it be definition, law, or what not, is not easy to say. Even to the adult what are long established definitions and laws must often be modified to conform to new usage, discovery, or other social change. Taking too few illustrations means that one is likely to find certain things true of them, not true of a larger number. Perhaps the medium course is best in this as elsewhere. It must be expected that all generalizations will first be seen in a limited sphere, and that they will be extended and modified with experience.

Induction calls for both the discovery and the testing of the hidden principle. This is done by the methods of agreement, difference, the joint method, variation, and residues. The joint method is the use of the first and second together. The method of residues is so rarely used in the grades that its consideration may seem needless. Yet high school and college make large use of this method. The grade teacher will need much facility in the use of the methods of agreement, difference, and variation.

Generally in induction one uses first of all the method of agreement, but not necessarily. This method comes in close touch with the generalization. The inquiry is for the thing, fact or facts uniformly associated with the generalization in all cases available for examination. The inference from this association is that the possible cause has been found for the generalization. However one may have found only a coincidence. To test this it is necessary to make use of the method of difference, variation, or both if possible. When cases of yellow fever occurred there were mosquitoes uniformly present. The question promptly came: "Where the mosquito is absent are there no cases of fever at all?" This question embodies the fundamental idea of the method of difference. Had it been possible to find cases where the mosquito was absent, other causes would have been probable. Lastly came the question: "Do cases of the fever vary in any degree with the frequency of the mosquito?" When the answer to this had made the mosquito seem to be the cause, it was finally decided by showing how the mosquito carried the germ and by instances in which it had been seen to do so.

The method of difference is occasionally usable in the absence of both of the others. The method of variation is very frequently usable in the absence of the others. If the variation can be stated in mathematical terms the certainty of the causal relation is greater.

The complexity of the situation may be so great that the discovery of the principle for explanation may be far beyond the student. Even Darwin had in some of his problems to acknowledge that he could not find the explanation, and the medical world is yet baffled in regard to the problems of cancer and infantile paralysis.

So many forces are at work in many of the situations confronting one, and often so many of the facts are inaccessible, that it is not possible to reach an accurate conclusion. The element of probability in such cases must be recognized and its degree stated if possible. It is present in every phase of the general business of living. The business man, be he never so successful, cannot tell exactly how much of any given kind of goods will be demanded of him during the season.

The method of residues has been generalized in the algebras under the heading of "elimination." Problems in elimination present situations in which the same two or more unknown quantities appear and reappear in definitely varying proportions. It becomes necessary to state these situations in terms of equations and to combine them so that one of the unknown quantities will disappear. One may eliminate by addition, subtraction, comparison, and substitution.

Deduction. This phase of thinking deals with problems whose laws and principles are available either from one's own experiences or from the experiences of others.

An analysis of the situation suggests the class of problems to which the one in hand belongs. This is the fact stage,—description or narration. The principles bearing on such situations show how these facts came to be, *i. e.*, explains them; or, second, what one should do in dealing with them for the desired end in view; or, third, what the outcome is likely to be in regard to the forces active in the situation. This finds illustration in the work of the physician. From observation of the symptoms he classifies the disease. His knowledge of the laws and principles of the disease enables him to explain how the patient contracted the disease; second, they guide him in dealing with the disease; and, third, they enable him to infer the length of time the patient will be ill and also the probable outcome of the disease.

Errors in this phase of thinking, as elsewhere, consist in not seeing clearly the facts of the situation, and also in the misuse of the laws and principles. Certain habits, personal likes, and dislikes are all likely to interfere.

The Composite Phase. The thinking that must be done most frequently involves two or more of the foregoing phases in an ever varying proportion and frequency. It may relate to one's ordinary routine or it may reach out to the constructive thinking necessary for the solution of the complex problems of invention, business, engineering, administration, home making and keeping, acquisition and organization of knowledge, etc.

The imitator can deal with the problems of to-day as long as they are like those of yesterday. It is analogy that holds so large a sway in such cases. The constructive mind is not thus hampered. It sees not only the facts to be dealt with but the end sought, and, gathering from many sources, selects with reference to the desired result, organizes, modifies, and gains credit for originality or inventiveness. A principle supposed to be limited in its use is tried in some new field and found to work well. There is nothing in the inventive type of mind which good teaching cannot develop.

From the suggestions thus far offered the following types of lesson plans suggest themselves:

1. The plan for description or narration or both in varying proportion.
2. The analogy for guidance, explanation, or inference.

3. The plan for generalization of laws or definitions, and the discovery of the forces at work to cause uniformities.

4. The plan involving the use of laws or principles for either guidance, explanation, or inference in dealing with problems.

5. A composite plan involving the use of two or more of the foregoing in varying proportion.

The following is suggested with reference to application in the school.

A plan of battle must be made with reference to the battle to be fought. Ready made plans of battle would be absurd. The plan has always to be modified in one or more details before the battle is over, but this does not do away with the necessity for a carefully thought out plan.

Similarly in teaching, the plan must be thought out with reference to the class to be taught. Yet it often will become necessary to modify the plan while the lesson is in progress.

This is proper but is not suggested to excuse wandering of thought in either teacher or pupil. Indeed one of the large responsibilities of the teacher is to hold the class to the discussion of the work in hand.

School grades vary so much that it is not possible to offer illustrative plans always suitable. The teacher's skill and resource will always find abundant opportunity for exercise in making a plan to fit the situation in hand.

As a theme for a lesson it is always important that a definite problem be stated briefly, clearly, and accurately. It is important also that the pupil see some use for the knowledge and power that will be gained by the mastery of the problem. Definite directions for study should follow the statement of the problem. These should include statements of the general lines along which preparation should proceed,—suggestions as to the thinking which should be done, the books, and other material that are to be consulted or prepared.

Ideally one should work towards recitation by topics, but one condition for doing so is that the teacher become an expert in organization of subject matter and in questioning. All vague, hazy, or indefinite questions should be omitted always. When the teacher knows the subject in hand thoroughly there is less likelihood of these types of questions being used. Questions that can be answered by yes or no ought always to be omitted by the beginner and rarely used by the older teacher. Certainly all questions that admit of guessing the answer, those that are needless, and those that wander from the subject have no place in the recitation. However, the teacher will sometimes meet the unusually timid who must be helped to self-confidence at times even by questions that contain the answer.

What questions should be asked is conditioned by what the teacher wishes. If this is clearly in mind the selection of the right question is largely determined.

Questions should be phrased in direct, simple language. Rarely is the complex sentence in place in a good question. Illustrations of suitable questions are offered in the plans that follow.

I

A plan for the descriptive study of the surface, soil, drainage and coast line of the Chesapeake Bay basin.

We shall need this information in order to understand more fully the problems the people of this region have had to meet, how they have had to meet them, and how they are solving them to-day.

In preparing the lesson make use of the relief maps, the descriptions given in your texts, and of the pictures and descriptions in the books on the "reserved shelf" in the library.

Examine the mountains in regard to their arrangement, the distance of the chains apart, the variations of the system in height and width, the two kinds of valleys, and their relative numbers. Trace two routes through the mountains suitable for travel.

Examine the pictures of these mountains. Think of them as once covered with forests entirely, and with much tangled undergrowth, as inhabited at one time mainly by wild animals and Indians, and as being largely unknown and mysterious.

Examine the slope east of the system and note how its width varies, the degree of the slope, the location of the "fall line," and the peculiarities of the surface on both sides of the line.

Observe the direction of the rivers, their frequency, their navigability, and locate the Potomac, the Rappahannock, the James, the York, and the headwaters of the Ohio, Tennessee, and Cumberland. Compare the rivers east of the bay with those on the western side.

Find out how the soil varies in quality and kind.

Examine the varying dimensions of the bay, its direction inland, its navigability, its harbors, its protection from the ocean storms, and its fisheries.

After having next studied the climate we shall try to see how these conditions affected the occupations and history of the people.

While it is possible to have nothing but description in geography lessons, it is frequently advisable to broaden the aim of the lesson sufficiently to make some use and explanation of the facts under consideration. In the lesson suggested it would probably be well to try to infer how the barrier of the mountain system would affect the spread of settlements westward. The explanation of the presence of these mountains would probably be much beyond the ability of the pupils to think out, and should be left in their minds as one of the open problems to be taken up for solution later.

II

Bryant's "To a Waterfowl" is an excellent illustration of the use of description, narration, and analogy. For its study the following suggestions are offered.

The poet was walking out in the country and trying to make a decision in regard to the problem of how he should spend his life. It will be of interest to see how the inspiration for the poem came and how it helped him in solving his problem.

Find Plainfield, Mass., and read in your geographies the description of that part of the country. Try to think how its hills, fields, woods, lakes, and valleys appear. Try to place yourself in his place; imagine the beautiful pictures he describes as you slowly read the poem. Commit the poem. Which are the most beautiful stanzas? If you wish, place in the picture the hills, fields, woods, lakes, and valleys that you know best. Examine the comparison made between the wild bird and his life. See what conclusion he reaches and note which stanza tells why.

The beauty and interest of the poem may be more or less largely lost by lack of tact in questioning. There should be discussion and comment to make clear the pictures presented, but such poems are somewhat like a beautiful rose. The rose is a beautiful thing to be studied, enjoyed, and appreciated, but if it is pulled to pieces in the process it has no further value as a rose.

III

Opportunity for the generalization of laws on the basis of a suitable number of cases occurs in all school subjects. In algebra it is the law of which so much use is made. The explanation of the law early drops into the background. Illustrations of this are the laws of factoring and the laws of multiplication. Their close relation and the light which each of these throws on the other indicate that they should be presented in close relation. The same is true of much of the work in arithmetic. Many of the rules are generalizations of customs that slowly grew up and whose explanation is quite remote from the use of the rules. The same may be said of much of the work in spelling and language. Part of the problem indeed is to discover what the current custom is.

The following illustrates plans for the discovery of a principle:

Our examination of the climate of the Bermudas shows that the temperature of the islands varies relatively little throughout the year. We try to discover the causes of this uniformity, *i. e.*, to find the force or forces at work that make the temperature so nearly the same.

It will be well to examine the geography of the islands first. This will include the following, together with any other facts that you may think worth considering;—their latitude, longitude, variations in the temperature of the surrounding water, the surface, soil, exposure, vegetation, prevailing winds, and the distribution of the rainfall.

Having done this, examine other places where the temperature also varies little, *e. g.*, Wake island, Guam, the Bahamas, Samoa, St. Helena, the Fijiis, etc. Compare these places with the Bermudas in regard to each of the points mentioned, and note what things are in common to them all. Think what this suggests as the possible cause and why.

Next select places where the temperature varies widely during the year, *e. g.*, Mankato, Omaha, St. Louis, Denver, etc. See if the facts common before are present in these localities. Think how this affects your first conclusion and why.

Try next to show how the things in common could produce the result,—the relatively uniform temperature,—and think how this affects your first conclusion. State your conclusion.

Test it by asking what you would expect to be true of the temperature of Honolulu and why. See in the reference books just how the temperature of Honolulu does vary.

The inductive method of variation has a large place in all research work in the fields of science. It is not by any means limited to those fields. History offers many opportunities for its use. Among the many interesting topics in which this method may be used is "The causes of the variation and distribution of immigration." Among those in geography is "The causes of the tides." This latter gives the chance for many to make first hand observations when living at the seaside, and when not, of considering those made there and recorded.

The observer notes that the tide rises and falls everyday, but a certain number of minutes later each day. He also notes that the moon rises the same number of minutes later each day. It is further noticeable that during each period of four weeks the height of the tides varies. When these are at their greatest height, sun, earth, and moon are in a straight line, but when the three form a right angle the tides are lowest. The variation being a constant one the question of the relation between the tides and sun and moon seems very certain but there remains the question, "How do they cause the tides?" It is at this point that the texts take up the problems without first having considered observation as having much to do with the case.

IV

Deduction has a very large place in all fields of work. Geography is one of the very interesting sources of illustration of deduction. In geography as elsewhere, laws, principles, and analogy are used for explanation, inference, and guidance. The following will serve as an illustration.

Problem:—How should we expect the temperature of the British Isles to vary throughout the year? Why?

In order to think this out, first review the list of principles controlling climate as stated above. Then note the range of the islands in latitude, the directions and exposure of the slopes, the direction and position of the high lands, the kinds of soil, the variations in temperature of the surrounding bodies of water, and the prevailing winds. Ask yourself in what ways you would expect each of these to affect the temperature of the country and why?

After the inferences have been stated the teacher should turn to an accurate statement of the variations in the temperature and compare the results of the children with those of the books. Progress in making accurate inferences will be assisted by noting the mistakes made and trying to see how they were made.

The same problem may be treated from the point of view of explanation, but in this the variations must be known and then the reason for each sought. A knowledge of the principles is equally necessary in this, because principles are as already defined. The following quoted from Reclus's Europe, pp. 18, 19 and 20, in regard to Great Britain, is an illustration of a statement of facts for explanation.

"Only in the inland counties (in summer) and on part of the east coast do we meet with features reminding us of a continental climate. The temperature during that season decreases with a considerable degree of uniformity, from 63 degrees Fahrenheit in the Thames valley, to 54 degrees in the Orkneys. In the winter the mean temperature of the Orkney

Islands is hardly inferior to that of London, situated 500 miles farther south.

"In the eastern part of Great Britain, and more especially in that part of it which lies between the Naze and the Firth of Forth, the winter is coldest. January is a far colder month on the banks of the Thames than in the Hebrides, and the plants which the frosts of Middlesex would kill flourish in these islands in the open air, even in midwinter. Yet it happens but rarely that the largest rivers become icebound. The winter temperature is mildest on the southern coasts of Devonshire and Cornwall, and there the myrtle and other subtropical plants flourish in the open air all of the year round.

"Snow and ice are, of course, known, and the quantity of the former which occasionally falls in northern England and in the Scotch highlands is great. It is rare, however, for the temperature to fall below 18 degrees Fahrenheit, and rarer still for such a degree of cold to continue for any length of time. The difference between the mean temperature of the coldest and the warmest months hardly ever exceeds 25 degrees Fahrenheit, and in southwestern England it does not amount to 19 degrees. The daily range of temperature in Shetland, the Orkneys, and the Hebrides, is only about 10 degrees. On the west coast of Great Britain it rises to 12 degrees and 14 degrees, and in the central districts to 15 degrees, and in the south to 20 degrees."

V

The composite thinking finds illustration in the following:

A student desiring a study table for her own room at home had the opportunity to make one in the manual training department. There were many facts for her to consider and these came in the form of questions.

How much space could be taken by the table when completed? Of what material must it be made? Why? What would she be likely to use the table for? . What drawers or shelving should be made a part of it? What suggestions could she get from magazines, books, furniture stores, or elsewhere in regard to the arrangement and size of these? What had occurred to her as suitable in regard to these? After discussion and criticism of the ideas gathered, she was directed to assemble and organize such as were worth while and express them in a plan drawn to scale. She was also told to make out an order for the material. These were then considered for possible modification. The work of construction was then begun and carried out to a successful issue.

THE DISINFECTION OF BOOKS

By Leonard Blaine Nice, Clark University

Books seem well adapted for carrying small-pox, measles, scarlet fever, trachoma, diphtheria, erysipelas, dysentery, typhoid and tuberculosis. Yet so far as I have been able to find no satisfactory method for the disinfection of books is being used anywhere in this country. Books are a particular diversion of invalids and convalescents, therefore they are in much danger of becoming infected. If a person sneezes or coughs, he is very apt to hold his book in front of him. By placing petri dishes around tubercular patients, Flügge (14) found that tubercle bacilli are thrown as far as a yard in the coughing, sneezing or even speaking of such persons. Besides the danger of contamination in these ways and in the ordinary handling of a book, many people persist in the uncleanly habit of moistening their fingers in their mouths when turning the leaves.

Scarlet fever has been carried to distant places by letters (11). A case is known where a mother and baby were fatally infected with septicemia from a book (11). In Bordeaux several people were attacked by a feverish lumbago after having rearranged the library books of the Faculty of Medicine (6). Letters written by small-pox patients infected the post-office officials in Kent, England (29). Most serious of all, an epidemic of tuberculosis occurred among the officials in the archives of Kharkow, Russia (11). The excise officer had been in the last stages of tuberculosis and had been in the habit of moistening his fingers with saliva as he handled the documents.

The length of time that the different pathogenic bacteria can withstand drying varies greatly. Krausz (15) placed bacteria from 48-hour-old cultures in books and kept them in the dark at room temperature. He found that cholera lived only 48 hours, whereas diphtheria lived 28 days, Staphylococcus 31, typhoid 40-95 days and tubercle bacilli 80-103 days. Other investigations confirm his results except in the case of

---

Note.—I wish to thank Dr. Wm. H. Burnham for suggesting this problem, my wife, Margaret Morse Nice for aid and criticism, and the Library of Clark University for securing the literature.

tuberculosis and diphtheria. Abel (29) found that diphtheria bacilli retained their virulency on toys for six months and this is the length of time that Von Schab (27) gives. Lion (17) and Von Schab both say that tubercle bacilli withstand drying for six to nine months.

The number of bacteria that may be found on much used books was investigated by Lion (17). A novel from a public library varied from 250 bacteria per 100 square centimeters on the middle of a clean page to 1,250, 1,875 and 3,350 on the dirty edges. A college atlas showed from 650 to 1,075 per 100 square centimeters; an anatomy book 2,275 to 3,700. The bindings were by far the richest in bacteria yielding on an average 7,550 per 100 square centimeters.

As to the pathogenic bacteria that may occur on books, the following investigations are of great interest. Krausz (15) inoculated seven guinea pigs with dirty pieces of paper from much used books and they all died of peritonitis. The eighteen inoculated with pieces from clean books remained healthy. Du Cazal and Catrin (6) found Staphylococcus pyogenes on an old book in a hospital. Most striking of all are Mitelescu's (20) experiments. He took 60 much used books that had been in a public library from six months to two years; he cut out the dirtiest parts, soaked them in salt solution, centrifuged the liquid and inoculated guinea pigs with the sediment. Nineteen died of septicemia and twelve of streptococcus infection. He repeated the experiment with thirty-seven books from three to six years old. Fourteen of the guinea pigs died of septicemia and fifteen contracted tuberculosis. The damp dirt on the older books was a good medium for tubercle bacilli.

A book is a very difficult thing to disinfect. The method used must kill all the bacteria, must not injure the books and finally must be as easy to use and cheap as possible. The disinfectants that have been tried for books are steam, Pictet's gas mixture, formalin, carbo-gasoline, steaming formalin vapor under vacuum, dry hot air and moist hot air.

Steam fulfills the first requirement by killing all the bacteria, but unfortunately it is very injurious to books, especially to leather. It is recommended, however, by Abba (1), Du Cazal and Catrin (6), Krausz (15), Petruschky (22) and Rickards (23) who suggest that all school and library books should be stitched instead of glued and have as cheap covers as possible so that steam disinfection would not injure them very seriously.

Letters on the other hand do not suffer any bad effects from being autoclaved. This was the experience in the aforementioned smallpox epidemic in Kent; the letters were autoclaved, no more smallpox was disseminated and the letters themselves were uninjured. This was confirmed by experiments of my own.

Pictet's gas mixture—sulphuric acid and carbonic acid in equal parts—was tested as a book disinfectant by Von Schab (27), but he found it ineffective.

On account of the convenience of formalin as a disinfectant it has been adopted in many cases for books without due regard to its effectiveness for this purpose; Lehman (16), Englund (7), Lion (17) and Miquel (19) had apparently satisfactory results with formalin. However more exhaustive investigations by Du Cazal and Catrin (6), Van Ermengen and Sugg (26), Knopf (14), Von Schab (27), Barbe (3), Ballner (2) and Rickards (23) have proved conclusively that formalin will not kill bacteria in books. A gas will not penetrate between the leaves of a book no matter how ingeniously the book is held open.

In this country a device for general fumigation is the DePree formaldehyde fumigator. Mr. DePree told the writer that he recommends no penetrative qualities for formaldehyde gas and that it is therefore not adapted for book disinfection.

A new method has recently been suggested by Beebe (3) for disinfecting books by immersing them for 20 minutes in a 2% solution of carbolic acid in 88 Baüme gasolene. He smeared a small amount of a bouillon culture on the leaves, 50 pages apart, of previously autoclaved books. One book was infected and immediately immersed for 20 minutes in carbo-gasoline; then the infected areas were placed in bouillon. Two other books were allowed to dry for an hour after being infected; they were then immersed for 20 minutes, and cultures made immediately from one of them, whereas the other was allowed to dry over night before they were made. 18 inoculations were made of B. diphtheriae, 7 of Staphylococcus pyogenes aureus, 18 of B. coli communis and 19 of B. typhosus—a total of 62—without growth in any case. He also placed tuberculous sputum between the pages of books and immersed then in carbo-gasoline for 20 minutes. Three guinea pigs were inoculated with this sputum, and one contracted tuberculosis.

I tested this method using 88 Baüme gasoline saturated with carbolic acid (about a 2% solution). Books thoroughly dry after having been autoclaved were inoculated 20 pages apart with a loopfull of agar or bouillon cultures. The inoculated books were then placed in a sterile chamber for 48 hours so that the cultures would thoroughly dry to prevent any danger of their being washed off. Instead of 20 minutes they were left in the carbo-gasoline for one hour. They were then removed and allowed to dry for 96 hours to make sure that the gasoline would all evaporate. Cultures were then drawn off. 80 inoculations were made, 28 of Bact. diphtheriae, 27 of Staphylococcus pyogenes aureus, and 25 coli communis. 55 of these grew: 25 of the diphtheria, 17 of the Staphylococcus and 15 B. coli.

The next step was to determine whether saturated carbo-gasoline solution will kill bacteria when placed directly in contact with them. Nine test tubes containing slant agar cultures of B. diphtheriae, Staphylococcus pyogenes aureus, and B. coli communis—3 of each—were filled with carbo-gasoline. This was removed after one hour and ten minutes. After 96 hours cultures were drawn off. Growth occurred in two of the Staphylococci cultures, one of the diphtheria and two of the B. coli.

By repeated tests it was found impossible to make a stronger solution of carbolic acid in gasoline than about 2%. So there seems to be no hope of modifying Beebe's method so as to make it effective. The only way that I can explain the lack of growth in Beebe's experiments is that his bouillon cultures must have been washed off by the gasoline since he did not thoroughly dry them. This is confirmed by my own experiments; for although they were well dried, only 25% of the bouillon cultures grew while 80% of the agar grew.

The three factors of formalin, vacuum and heat are combined by Kister and Trautman (12 & 13) in their method of disinfecting books. The books have to be held open; the temperature is 70° C. for two hours with a vacuum of 450 millimeters. This was further tested by Xylander (28) and also by Sobernheim and Seligman (25) and was found to disinfect books satisfactorily without injuring them. The apparatus consists of a formalin vaporizer, a disinfection chamber, a vacuum cylinder and an air pump. Although this method is effective, it is not very practicable; for only a few books can be disinfected at a time and the apparatus is complicated, expensive and difficult to manage.

Dry hot air at 140° C., when employed for a long time, will kill non-sporing bacteria, but such a high temperature is injurious to books. Mosebach (21) had good success in a few tests with dry air of 70°-80° for 14 to 24 hours, but Xylander (28) found that the least time necessary was 32 hours and that moisture supplied either by water or formalin shortened the disinfection time to 25 hours.

Moist hot air fulfills all the requirements for an ideal book disinfectant; for it kills all the bacteria, it does not injure the books and it is inexpensive and convenient to use. Several investigators worked along this line: Schumberg (24), who found that hot air of 100° C. and 55-65% moisture will kill bacteria without injury to leather; Ballner (2) who, adopted this method for single closed books using a temperature of 95° C. and 40-60% moisture; and Berlioz (5) who, with a temperature of 95° C. supplied his moisture by a dish of formalin and ethyl aldehyde. The perfecting of the moist hot air disinfection of books is due to Xylander (28) and Findel (9 & 10). Xylander's work was especially thorough and convincing, for he made considerably more than a thousand tests. 78° to 80° C. and 30 to 40% moisture for 32 hours will kill all non-sporing bacteria in closed books, even tubercle bacilli in thick layers, and does not injure the most delicate binding in any way, even after months of disinfection. Greater heat than 80° C. and more moisture than 40% is injurious to the books. When disinfecting a pile of books a small thermometer should be placed in a rather thick book in the middle of the pile. When this thermometer registers 70° C., which may take 11 hours, the disinfection may be counted as begun. It must continue for 32 hours in order to kill all the bacteria. I tested this method making 73 inoculations and obtained perfect success.

The apparatus needed is simple. It consists of a double walled case of galvanized iron. The space between the walls is filled with water. Heat is supplied from beneath. The shelves for the books are perforated or of wire. The moisture is supplied by water dripping from the roof onto a flat dish of porous material which is soaked full and then gives up the water in the form of vapor. The thermometer and hair-hygrometer are fastened to the inside of the door, which is fitted with a glass pane so that they can be read.

In order to find out the condition of affairs in this country letters were written to the Boards of Health of all the States and of all cities with a population over 100,000. They were asked what disinfectants and what methods they use in disinfecting contaminated school and library books. Only six answers mentioned library books; three of these said infected library books are destroyed; two, that they are fumigated with formalin, and one Board makes "daily reports to both school and libraries of all contagious disease matters," but it failed to state what action is then taken. As to school books 12 States and 10 cities do nothing at all; 9 States and 22 cities burn all contaminated books; 17 States and 25 cities use formalin; 2 States and one city use dry heat; 3 cities use steam and one State and 3 cities are trying carbo-gasoline. Of those using dry heat, one says merely "we use dry heat sterilizing;" a second uses 140° C. for one hour, which according to all authorities is too short a time to kill the bacteria and besides injures the books. The third uses 80° C. for 2 hours. I tested this and the cultures grew in every case.

Only nine States and 25 cities—those who burn and those who use steam—are taking proper precautions in regard to the danger of infection from scarlet fever, diphtheria, small-pox and occasionally measles. This is being done, however, at the sacrifice of the books. A significant fact is that not one of the 100 letters mentioned tuberculosis.

CONCLUSIONS

1. Books are known to have infected people with septicemia, feverish lumbago and tuberculosis. Letters have carried scarlet fever and smallpox.

2. Staphylococcus is able to withstand drying 31 days, typhoid bacilli 40 to 95 days, diphtheria one to 6 months, and tubercle bacilli 3 to 9 months.

3. Well used books have been found to have from 3,350 to 7,550 bacteria per 100 square centimeters.

4. Seven guinea pigs died of peritonitis when inoculated with pieces of dirty books. Guinea pigs were inoculated from 60 well used books that had been in a public library 6 months to 2 years. 31 died from septicemia and streptococcus infection. Other guinea pigs were inoculated from 37 books from 3 to 6 years old; 14 died from septicemia and 15 contracted tuberculosis.

5. Steam is an effective disinfectant but ruins the books.

6. Formalin is entirely untrustworthy as a disinfectant for books.

7. Dry hot air is not a satisfactory method.

8. Carbo-gasoline is absolutely inefficient as a book disinfectant.

9. Moist hot air at 80° C. and 30-40% humidity for 32 hours will kill all non-sporing bacteria in closed books, even tubercle bacilli in thick layers, and does not injure the most delicate binding in any way.

10. Boards of Health should make daily reports to the schools and libraries of all contagious diseases, including smallpox, measles, whooping cough, scarlet fever, typhoid, erysipelas, dysentery, diphtheria, venereal diseases and tuberculosis. Books that have been in the hands of such patients should be disinfected by the moist hot air method.

11. As a matter of precaution, especially against tuberculosis, it would be well if public library books that are much in use and all school books were disinfected by this method at regular intervals. Public school books should always be disinfected before given out to a new set of pupils.

12. When using a public library book one should realize that it may have been in the hands of some one suffering from tuberculosis or other disease. A wise precaution is to

carefully wash the hands after using such a book. One should *never* moisten his fingers with saliva when turning leaves.

BIBLIOGRAPHY

1. ABBA. Sulla desinfecione dei libri. Rivista d'Igiene e Sanita Pubblica. 1900.
2. BALLNER, FRANZ. Ueber die Desinfektion von Büchern, Drucksachen u. dgl. mittels feuchter heisser Luft. Leipzig, 1907.
3. BARBE. Désinfection des livres par les pulvérisations du formol du commerce. La *Presse Médicale*, Paris, Aug. 23, 1902. 10. p. 810.
4. BEEBE, W. L. Carbo gasoline method for the disinfection of books. *J. Amer. Pub. Health Ass.*, Jan. 1911. Vol. 1. pp. 54-60.
5. BERLIOZ, FERNAND. Désinfection des livres fermés. H. Daragon, Paris, 1907. 8 p.
6. DU CAZAL and CATRIN. De la contagion par le livre. *Ann. de l'institut Pasteur.* Paris, Dec., 1895, 9, No. 12. pp. 865-876.
7. ENGLUND, NILS. Om formaldehyden. Hygenic Institute of Stockholm, 1895, 45 p. Abstract in *Hygienische Rundschau.* Berlin, 1896. 6 pp. 369-70.
8. FICKER, M. Fortschritte der Schulhygiene. Müller, Charlottenburg, 1910. pp. 51-53. 68 pp.
9. FINDEL. Desinfektion von Büchern, militärischen Ausrüstungsgegenständen, Pelzen usw. mit heisser Luft. *Zeitschrift für Hygiene.* Leipzig, 1907, 57, pp. 83-103.
10. FINDEL. Deutsche Desinfektionszentrale, Berlin 20.
11. JOSIAS. De la transmission des maladies infectieuses par les livres. *Revue de Therapeutique.* Paris, 1906. 54. pp 7-12.
12. KISTER u. TRAUTMAN. Ueber Versuche mit Formaldehydwasserdampf nach dem Verfahren v. Esmarchs. *Zeitschrift für Hygiene,* Leipzig, 1904. 46. pp. 379-393.
13. KISTER u. TRAUTMAN. Ueber Desinfektionversuche mit Formaldehydwasserdampf. *Gesundheits- Ingenieurs,* Feb. 10, 1906. 29. No. 6. pp. 101-106.
14. KNOPF, S. A. L'infection des livres par le bacille de la tuberculose. *La Presse Médicale,* Paris, Feb. 24, 1900. 8. 16. pp 70-71.
15. KRAUSZ, ARTHUR. Über die Infectionsfähigkeit und Desinfection von gebrauchten Büchern. *Zeitschrift für Hygiene.* Leipzig, 1901. 37. pp. 241-249.
16. LEHMAN, K. B. Vorlaüfige Mitheilung über die Desinfektion von Kleidern, Lederwaaren, Bürsten und Büchern mit Formaldehyd. *Münch. Med. Wochenschrift.* Munich, Aug. 8, 1893. No. 32. 40. pp. 597-599.
17. LION, ALEXANDER. Untersuchungen über den Keimgehalt und die Desinfection benutzter Bücher. Würzburg. *Stahel 'schen Buchdruckerei,* 1895. 32 pp.
18. LUCAS-CHAMPONIERRE. La désinfection des livres fermés et l'avenir des sterilisations. *Jour. de Médicine et de Chirurgie.* Paris, 79. 4th series. pp. 321-326.
19. MIQUEL, P. Sur un mode de désinfection des livres. *L'Hygiene générale et appliquée.* Paris, 1907. 2. pp. 650-658.
20. MITELESCU, J. Beiträge zur Aetiologie der Tuberculose. *Zeitschrift für Hygiene.* Leipzig, 1903. 44. pp 397-406.
21. MOSEBACH, O. Untersuchungen zur Praxis der Desinfection. *Zeitschrift für Hygiene.* Leipzig, 1905. 50. pp. 485-501.

22. Petruschky, J. Experimental-Untersuchungen über Desinfektion von Akten u. Büchern. *Zeitschrift für Krankenanstalten*, Mar. 5, 1905. pp. 106-110.
23. Rickards, Bert R. The Disinfection of Books. *Amer. Jour. of Health*. Boston, 1908. N. S., 4. pp. 325-331.
24. Schumberg. *Zeitschrift für Hygiene*. Leipzig, 1902. 41. p. 167.
25. Sobernheim and Seligman. Bücherdesinfektion. *Desinfektion*. 1910, No. 11. Cited in *Zeitschrift für Schulgesundheitspflege*, 1911, Nr. 2. pp. 135-136.
26. Van Ermengen et Sugg. Recherches sur la valeur de la formaline à titre de désinfectant. *Archives de Pharmacodynamie*, Paris, 1895. 1. pp. 141-298.
27. Von Schab. Beitrag zur Desinfection von Leihbibliotheksbüchern. *Cent. für Bacteriologie u. Parasitenkunde*, 1897, 21. pp. 141-6.
28. Xylander. Die Desinfektion von Büchern mittels feuchter heisser Luft und gesattigten, niedrig temperierten, unter Vakuum strömenden Formaldehydwasserdampfen. *Arbeiten aus dem Kaiserlichen Gesundheitsamte*, Berlin, 1908. 29. pp. 288-312.
29. Young, A. S. The disinfection of books. *The Sanitary Record*. London, Nov. 25, 1898. 22. pp. 561-562.

THE COMMON DRINKING CUP

By W. A. MATHENY, Clark University

The history of the movement against the use of the common drinking cup dates back three and one-half centuries. According to some old letters recently found by Martin (9) in the library of the city of Zürich, Zanchiny, a former student of Calvin and at one time Professor of Theology at Strasbourg, insisted on individual communion cups, and especially was this enforced during the Plague of 1564. Among other manuscripts he found interesting documents showing that in 1783, Christian Gottfried and a little later, Johann Daniel Metzger, raised serious objections to the common cup giving as a reason his belief that syphilis may be transmitted by it.

Scientific investigation of the problem did not begin until about ten years ago. Metzger and Mueller (10) made diligent inquiry among one hundred and twelve physicians. Their results showed that the promiscuous use of the public cup offers beyond a question of doubt positive and serious dangers. By inoculating guinea pigs in the usual manner Roepke and Huss (19) were the first to prove definitely that tuberculosis can be transmitted from one mouth to another by means of the drinking glass.

One of the best experimental studies on the survival of infectious germs on glasses and forks was made by von Esmarch (6). Drinking glasses and forks were smeared with saliva mixed with cultures of tubercle bacilli and other microbes. He found that bacteria in a living condition adhere persistently to the dishes even after a careful washing. The edges of drinking glasses and the tines of forks were washed in cold water and wiped with a sterile cloth. They always showed infecting power after this process. Washing in lukewarm water gave no better results. Efficient disinfection can be obtained by allowing the utensils to remain five minutes in water at 50° C. Evidence of the tubercle bacilli even appeared after this method was employed. Washing in boiling water for one minute gave satisfactory results as did also washing in water at 50° to which had been added two per cent. carbonate of soda. Esmarch concluded that the ordinary washing of dishes has little value in getting rid of living organisms.

Cristiani and de Michelis (3) experimented along the same lines using different methods. In place of rubbing the objects with the saliva mixed with the cultures of bacteria as was done by Esmarch, they approached more nearly the natural conditions. A small portion of a culture of Bacillus prodigiosus was placed in sterile water and shaken until the bacteria were evenly distributed through it. A drop was then placed on the tongue and allowed to diffuse through the mouth cavity. Many perfectly sterile glasses were then immediately placed to the lips as in the process of drinking. The edges of these glasses were afterwards touched to the surface of plates of nutrient media. In every plate abundant growths of B. prodigiosus resulted showing beyond a doubt that the saliva is able by the simple contact which exists in the act of drinking to contaminate the edge of the glass sufficiently so that the germs of one mouth may be carried to another mouth.

Their work on the sterilization of glasses gave somewhat different results from those obtained by Esmarch. They contaminated the glasses with B. prodigiosus by the same method that he used. In their process of cleaning they proceeded as follows:

1. A series of three glasses were all simply wiped with a sterile cloth without washing.

2. Another series was rinsed in a basin of cold water and afterwards wiped as one wipes generally in the kitchen, that is, with little energy.

3. A third series was washed as the preceding and rinsed afterwards in pure water then wiped as one wipes in the laboratory, that is, carefully.

The results obtained showed method 1 to be positive; method 2 also positive but the colonies were less abundant. Method 3 showed some positive and some negative.

These experiments were repeated with Staphylococci, Streptococci and the Bacillus of Loeffler. The glasses were contaminated according to Esmarch's method. The results were practically the same as those stated above for B. prodigiosus. The writers conclude that careful washing is extremely beneficial.

Saroglau (22) experimented with spoons and drinking vessels using Bacillus prodigiosus, B. subtilis and Staphylococci. Smears of these three forms were placed on the glasses and spoons in three different solutions,—pure water, albuminous water and saliva. The test for the presence of bacteria remaining on these utensils was made by touching them to the surface of the nutrient media. B. subtilis was found on the glasses twenty-three days after it was smeared there in the ordinary water solution, and twenty-six days after on the saliva glasses. The saliva-Staphylococci glasses gave positive results when tested at the end of four days. B. prodigiosus on the saliva glasses was also positive at the end of four days.

The same writer made some extensive studies with the common cup used in communion service. He found it to carry bacteria in a living condition, the wine used having absolutely no effect on the organisms.

He further reports cases of syphilitic infection occurring in certain student societies where the common drinking cup was used. He is strongly of the opinion that infection of this kind can occur through the use of the public cup.

By means of guinea pig inoculations Price (18) has proved that table utensils used at Sanatoria are good carriers of tuberculosis. The washings from forks, cups, spoons, etc., used at one meal by consumptives were injected into eight guinea pigs. Forty-one days later six, or seventy-five per cent., of the pigs, were found to have tuberculosis.

In another experiment on similar utensils he found that no tubercle bacilli survived when the articles were thoroughly washed with soap and water as hot as the hands could stand and then rinsed in boiling water.

In this country objection was first raised to the common cup by VanDerwerken (23) in 1892. In 1898 Anders (1) found tubercle bacilli and Staphylococci in the dregs of a communion cup used in a Philadelphia church. Five years later Kinyoun (7) isolated pneumococci and the Klebs-Loeffler bacilli from a public drinking cup taken from a railway coach.

The results obtained by Davidson (4) in 1908 gave the movement a great impetus. He made extended studies of various public drinking vessels. On cups taken from a school room he found both tubercle bacilli and pneumococci. That there could be no doubt of the identity of these organisms he isolated them, grew them in pure culture and inoculated guinea pigs. His evidence is convincing in every particular. In other experiments he isolated from school cups Streptococci apparently the same as those occurring in sore throats and tonsilitis. The pus germ Staphylococcus aureus was present also.

In another study Davison (5) reports securing a cup from a well on a college campus where it had been used for weeks by workmen and by students. By inoculating a guinea pig with the washings of this cup he proved that it bore living and virulent tubercle bacilli. A cup taken from a railway station when examined in a like manner showed tubercle bacilli. He summarizes his experiments by saying that "Thirty-seven and one-half per cent. of the public drinking cups examined for the presence of pathogenic germs, bore tubercle bacilli." He further states that "These revelations, the reader will note' harmonize with the well-known fact that half of the individuals of the human race in civilized countries are infected with the tubercle bacillus before the twentieth year."

In this connection the germ content of the mouth becomes of considerable interest and importance. That many people apparently in good health may carry pathogenic organisms in their mouths has been demonstrated by a large number of investigators. This condition is especially true among convalescents. We have already cited indisputable evidence that a part of the germ content of the mouth is deposited on anything touched by the lips, especially is this true with glasses, cups, forks, spoons, etc. Davison (5) says: "An examination of a hundred glass slips touched by the lips of different persons showed the number of germs deposited on each to vary from a few hundred to more than a hundred thousand. Three clean, sterile glasses filled with sterile water and each used once by a child presented rich infection under the microscope. All bore bits of dead skin Number 1 had on its brim approximately 13,000 bacteria; number 2, 20,000; and number 3, had 28,000."

An experiment similar in nature was performed in our laboratory. A hundred glass slips were touched by the lips of different people and then subjected to microscopic examination. The results in no way differ from those obtained by Davison.

Of intense interest is a recent experiment performed by the Department of Health of the City of New York. The information was sent the writer by letter from the Sanitary Superintendent, Dr. Walter Bensel. There seems to be no published account of this work so the entire letter is quoted.

NEW YORK, Sept. 12, 1910.

W. A. MATHENY,
Clark College, Worcester, Mass.

Dear Sir: In response to your letter of September 5, requesting information concerning the tests made by the Department of Health with common drinking cups, I beg to submit the following:

In making the tests twenty-two patients of the Willard Parker Hospital of this department were used. Nine of the patients had diphtheritic membranes and diphtheria bacilli were present in the throat of every patient. Each patient drank water from a sterile glass, the place where the patient's lips touched the glass was marked for identification. The glasses were allowed to dry after which a culture was taken from the portion of the glass touched by the lips of the patient. The results are shown below:

In addition to showing the presence of diphtheria bacilli, all of the cultures with the exception of two showed the presence of streptococci.

Respectfully, WALTER BENSEL, M. D.
Sanitary Superintendent.

Number of Patients	Period elapsing between the time the glass was touched by the patient and the time the culture was taken.	Results of cultures from glasses (diphtheria bacilli present.)	Per cent.
8	10 minutes	3	37.5
5	1 hour	2	40.
4	4 hours	1	25.
5	18 hours	2	40.

Slack, Arms, Wade and Blanchard (21) in their examination of 8,531 Boston school children conclude that,

"At least 1 per cent. of all healthy school children are carriers of morphologically typical diphtheria bacilli (Wesbrook's A, C and D types)."

Pennington (17), of the Philadelphia Health Bureau, has made investigations among well school children. In twenty-five schools taken at random she found 9.3 per cent. of the children infected with diphtheria-like organisms. About one-eighth of these organisms were highly virulent to guinea pigs.

Von Sholly (20) examined the throats of one thousand tenement-house children who came to the hospitals and dispensaries of New York City. Children suffering from anything suggesting a "sore throat," nasal discharge, or laryngitis, were not included in the experiment. Of this number eighteen or 1.8 per cent. showed virulent Klebs-Löffler bacilli.

From the experiments cited and from the works of Neumann (14), Park and Beebe (15), Kober (8), Müller (13), and many other investigators we may conclude that at least a half-million people in the United States carry in their mouths or throats typical diphtheria bacilli. More than a fifth of these are virulent and ready to do deadly work on reaching a susceptible person.

Park and Williams (16) have isolated typical pneumococci from about one-half of all mouths of well persons examined.

Miller (11, 12) was able to discover typhoid bacilli in the sputum of the mouths of apparently healthy persons. Bulkley (2) in his book, "Syphilis in the Innocent," details many cases, and even epidemics, of syphilis transmitted by means of spoons, knives, forks, glasses, jugs, tobacco, pipes, etc. It is now known to science that the specific organisms of all the common diseases of this country except five are found in the mouths of different persons.

The evidence cited certainly more than justifies the action that had been taken against the use of the public drinking cup. It is now, Feb. 1911, abolished by law in seven states. Kansas, in March, 1909, was the first state to take this action. Similar action has since been taken in Oklahoma, Michigan, Wisconsin, Massachusetts, New Hampshire and Mississippi. Thirty additional State Boards of Health have condemned the public cup and expect to abolish it in the near future. In six states such legislation is now pending.

At a recent meeting of the national Federation of Women's Clubs held at Cincinnati a movement was started among its million members to abolish the common cup in every state in the Union.

More than forty railroads throughout the country have substituted the individual paper cups for the old time rusty cup familiar to every one. The movement is rapidly gathering momentum and threatens to abolish in every state "this symbol of equality and good fellowship," as it was explained to the writer by a physician "not yet convinced." In theatres, department stores and public buildings of all kinds the old cup that has served for ages is seen no more.

The public schools throughout the country are rapidly awakening to the problem. In a very large per cent. of our cities some form of bubbling fountain or the individual cup is now used. It is evident that the former is more hygienic and should be used wherever it is possible to have it.

Of all the fountains now in use the style which is run by foot-power seems to give the best results. A slight pressure with the foot on a pedal at the base of the fountain starts the water flowing in a uniform stream. When the stream is not flowing a dust-proof cap protects from contamination the orifice through which water is delivered to the consumer. It is economical in the amount of water used, the flow being discontinued at the will of the drinker. The continous flow bubble fountain is not desirable on acount of its great waste of water. One model of the former fountain can be set up in any sink, and is adjustable to any height. Another model is made in different heights thus rendering it suitable for any grade of pupils. An important consideration in favor of this fountain is the fact that there is no way of tampering with the apparatus to regulate the size of the flowing stream. This removes a factor which has caused other fountains to be used as "playthings" by the pupils. Considered from every point of view this style of fountain is, in the opinion of the writer, the most satisfactory one now on the market.

There are a great many different varieties of individual cups now in use. In practice the glasses give better results than the paraffin cups. The latter are soon soiled and as they are unwashable their sanitary nature is soon lost.

If individual cups must be used then there should be more attention paid by those in charge to the conditions under which the cups are kept when not in use. It is common practice for the pupils to keep their cups in their desks, a method which is both inconvenient and unhygienic. A better plan is the one now used in several states. The cups are numbered and hung on numbered pegs in a dust-proof case which is usually kept in one corner of the schoolroom. This allows of a better inspection of their cleanliness on the part of the teacher and makes it convenient for all concerned. The school should own these cups and should assume the responsibility of keeping them sanitary.

In making inquiry among the teachers of this city where the individual cup is in use, we have found that some of the teachers insist that the cups be washed regularly, while others give the matter little or no attention. Each child is supposed to supply its own cup and keep it in its desk when not in use. The great majority of pupils do this; although there are some who do not. The latter class borrow from the former class or do without drinking. Practice shows that it is not possible to control the borrowing and lending of cups among the pupils.

That the borrowed individual cup may offer serious dangers to the user is well established. Six individual glasses were obtained from some of the schools of this city and examined by the usual laboratory method. Two were pronouncedly filthy while the remaining four were found to be far from sterile. On staining these glasses they were found to bear Staphylococci Streptococci, and Bacilli in great numbers.

Another disadvantage of the individual cup is found in the attitude assumed towards it by the larger pupils,—namely that it is childish for them to carry a drinking glass about with them. The principals and teachers of this city are united in the opinion that the bubbling fountain is from every point of view more desirable than the individual cups.

Summary and Conclusions

I. Science offers clear and positive evidence that living virulent pathogenic organisms are transmitted from mouth to mouth by means of the common drinking cup.

II. Sentiment against the use of the public cup is spreading rapidly. Laws abolishing it have been passed in at least seven states.

III. The bubbling fountain and the individual cups are being used in place of the common cup. In schools the former gives better results and should be maintained where it is possible to have it.

IV. This movement is neither a "frill" nor a "fad" in education. It is a fight for the protection of public health and is of public interest. There was a time when an epidemic of diphtheria was looked upon as "the wrath of Providence." To-day we charge it to ignorance and hasten to find the source. When the public cup is abolished far and near a deadly blow will be given to this and many other spreaders of disease which are now rooted in the ignorance of the people. The common drinking cup has had its day.

BIBLIOGRAPHY

1. ANDERS, H. S. The Individual Communion Cup and its Critics. *Penn. Med. Jour.*, Pittsburg, 1898-9, 83-88.
2. BULKLEY, L. D. Syphilis in the Innocent. New York, 1895.
3. CRISTIANI, H. and de MICHELIS, G. Du rôle de la vaisselle dans la transmission des germes infectieux. (à propos de la coupe de communion). *Revue Medicale de la Suisse Romande.* Genève, 1907, XXVII, 5-15.
4. DAVISON, A. Death in School Drinking Cups. *Technical World Magazine,* Aug. 1908.
5. —— ——. The Public Drinking Cup. *Good Health,* Nov., 1910.
6. VON ESMARCH, E. Verbreitung von Infektionserregern durch Gebrauchsgegenstände und ihre Desinfektion. *Hygienische Rundschau.* 1901, No. 2.
7. KINYOUN, J. J. The Bacterial Content of the Railway Coach. *Med. News, N. Y.*, 1905, LXXXVII, 193-199.
8. KOBER, M. Die Verbreitung des Diphtherie-Bacillus auf der Mundschleimhaut gesunder Menschen. Leipzig, 1899.
9. MARTIN, M. A. Historisches zur Frage des Einzelkelches beim Abendmahl. *Münch. Med. Wochenschr,* 1906, No. 4.
10. METZGER, A. and MÜLLER, N. J. C. La coupe de Communion et les maladies contagieuses. Broch. in 8°, 4 édition, Genève, 1905.
11. MILLER, W. D. Die Mikroorganismen der Mundhöhle. Die örtlichen und allgemeinen Erkrankungen, welche durch dieselben hervorgerufen werden. Leipzig, 1889.
12. —— ——. The Human Mouth as a Focus of Infection. *Dental Cosmos.* Philadelphia, 1891, XXXIII.
13. MÜLLER, E. Untersuchungen über das Vorkommen von Diphtheriebacillen in der Mundhöhle von nichtdiphtherischen Kindern innerhalb eines grossen Krankensaales. *Jahrb. f. Kinderh.*, Leipzig, 1896-7, XLIII, 54-66.
14. NEUMANN, R. O. *Ztschr. f. Hyg.*, 1902, XL, 33.
15. PARK. W. H. and BEEBE, A. L. Diphtheria and Pseudo-Diphtheria. *Med. Rec., N. Y.*, 1894, XLVI, 385-401.
16. PARK, W. H. and WILLIAMS, A. W. A Study of Pneumococci. *Jour. of Exper. Med.*, 1905, VII, 403-419.
17. PENNINGTON, M. E. The Virulence of Diphtheria Organisms in the Throats of Well School Children and Convalescents. *Jour. of Infect. Dis.*, Chicago, 1907, IV, 36-50.
18. PRICE, J. W. The Possibilities of Infection from Table Utensils at Sanatoria. *Jour. Amer. Med. Assoc.*, LII, 558-559.
19. ROEPKE, O. and HUSS, E. Untersuchung über die Möglichkeit der Uebertragung von Krankheitserregern durch den gemeinsamen

Abendmahlskelch nebst Bemerkungen über die Wahrscheinlichkeit solcher Uebertragung und Vorschlägen zu ihrer Vermeidung. *Deutsche med. Wochenschr.*, Leipzig and Berlin, 1905, XXXI, 107-149.

20. VON SHOLLY, A. L. A Contribution to the Statistics on the Presence of Diphtheria Bacilli in Apparently Normal Throats. *Jour. Infect. Dis.*, 1907, IV, 337-346.

21. SLACK, F. H., ARMS, B. L., WADE, E. M., and BLANCHARD, W. S. Diphtheria Bacillus-Carriers in the Public Schools. *Jour. Amer. Med. Assoc.*, 1910, LIV, 951-954.

22. SAROGLOU, D. De la transmission des microbes par la vaisselle et des dangers que présente la communion selon le rite Grec-Orthodoxe. Thèse présentée a la Faculté de Médecine de L'Université de Genève pour obtenir le Grade de Docteur en Médecine. Genève 1907. Thèse No. 163.

23. VAN DERWERKEN, A. The Individual Cup. *Annals of Hygiene*, Philadelphia, 1892.

THE PROBLEM OF JEWISH EDUCATION

By A. Millner

It gives me great pleasure to have the privilege to speak to you this evening as the Principal of the School now being dedicated by you. The problem of Hebrew education, is intrinsically connected with the higher problem of Israel's existence among the nations. The inter-relation and interdependence between the two problems is so great that to deal with one makes it hard not to deal with the other also. I may, therefore, be allowed to sketch first with a few words, the problem of Israel's existence and subsequently touch upon the problem of Jewish education.

A Greek legend tells us that there was an island in the Mediterranean which was inhabited by nymphs or sirens, endowed with voices so sweet and enchanting that all the mariners passing that island and coming under the spell of their bewitching tunes were charmed out of their senses and so they let their vessels founder on the nearby rocks or hurled themselves into the briny deep of the Midland Sea. When, however, Ulysses, the greatest adventurer of Greek mythology, in his wanderings through the Mediterranean came across that fatal island, he stopped up the ears of his companions with wax and tied himself fast to the mast of his vessel so as to escape destruction from the luring singers.

A different method to withstand the charms exercised by the sirens on their hearers was, the myth tells us, employed by Orpheus. When he, in company of the Argonauts passed that ill-famed island the nymphs, as usual, began to sing. But Orpheus, himself an unsurpassed singer, produced such a melodious song as to quell, or break the spell caused by the seductive airs of the sirens.

This Greek myth, my friends, illustrates to perfection, all the possible solutions of the problem of Israel's existence in the Diaspora, or Goluth. After the destruction of the Jewish state, when Israel was scattered over all the lands known in antiquity, the greatest problem that ever confronted a people came up for us Jews:—How shall Israel, disunited and scattered, preserve its identity? How shall it live on under conditions which have always brought about the complete extinction of any other tribe or race? Or let us formulate the problem thus: How shall Israel listen for centuries to the siren voice of the nations: "Come ye and amalgamate with us, and yet resist their luring call with the greatest of tenacity." One simple solution of the problem is that reached by our morally weak Jews of all generations. It is they who, not having the moral power to resist, yield, not unlike the seafarers of the Greek legend, to the siren voice, and merge their tribal identity into the ocean of humanity, thus cutting themselves adrift from Israel forever.

Happily, such weak Jews have always formed among us a negligible quantity. Another simple and yet most efficacious solution of the problem was that reached by our ancestors of old, whose watchword became, "Make a Hedge around the Law." Form a wall around the life of the Jew so as to make him impervious to influences from without." Their method was exactly the method employed by the mythical Ulysses. They stopped their ears to the siren voice of the nations, and so the Ghetto came into existence, first the spiritual Ghetto was initiated, and soon after followed the Ghetto real and proper. Tortoise-like the Jew built a scaly case around his being and tortoise-like he braved with his shielding shell centuries and ages. Were this the only merit of the Ghetto its existence would have been by it alone, fully and amply justified. This Ulysses way of guarding oneself against destruction-spelling influences was, if not the direct result of, yet quite congruous with, the general spirit that swayed the nations of antiquity and the Middle Ages down to our modern time.

But a change came over the spirit of the nations of Western Europe, which initiated a new era for mankind, and every country that became imbued with the spirit of that era has seen the medieval Ghettos crumble and fall. The old fence guarding Judaism against disintegration fell down in many countries, and Jewish sons and daughters are themselves great votaries of the new spirit.

Unhappily—or one may perhaps paradoxically say happily—the bulk of the Russian and other Eastern European countries is still clinging to the old way of preserving Judaism. They are kept *nolens volens* in the Ghetto. But how long, and the old Ghetto life will be no more!" There are many portents and signs that the time honored way of preserving Judaism is no more holding its own, even in darkest Russia.

And what about conditions among the two million Jews in this land of God? It is well known to you what a serious aspect the problem of perpetuating Judaism in this country bears. It looks as if Isarel were soon to give up its long struggle against amalgamation, say many pessimists. Israel is too much enticed by the all powerful spirit of our modern age to which it has free access, to withstand amalgamation for a long time.

Indeed, never in its long history has Israel been so much exposed to the luring call of the sirens. What shall modern Judaism do in order to live on? Back to the old time Ghetto? Impossible! The latter is gone in modern countries for good.

My friends, there is a third way to solve the problem of our existence. If we are not willed to merge our identity into the nations of the globe, and if time and circumstances make it impossible for us to live penned off in spiritual and real Ghettos, then let us adopt the method of Orpheus, let us make our Judaism produce such a charm as to offset the charm exercised on us so strongly by the Gentile world. And indeed our Judaism has stamina enough to withstand all the alluring powers in the world. But the kernel, the living forces of Judaism are hidden from the majority of our present generation. What they see of it is mostly incidental and unattractive. The reform wing of Judaism has essayed to meet this disadvantage. But in its zeal to emulate the nations in the charm and attractiveness of the formal side of things, it has cut away many a vital part of historical Judaism, so that if all Jews assumed the aspect of reform Judaism, their fate as a people would soon be sealed.

Such radical measures we can hardly compare to the life preserving method of Orpheus. Theirs is rather the method of Mitath N'shikah the lulling of Israel into the eternal sleep with a kiss by hobnobbing with and groveling before other cults. The real Orpheus method to be applied by modern Jews must indeed consist in making Judaism attractive in form no less than it is in content, in freeing it from many a vestige of the Ghetto, but also in preserving what is vital in historical Judaism, and withal, in making the latter a living force constantly reacting upon and influencing our lives.

One of the great reforms necessary and imperative within conservative Judaism concerns the Hebrew school. The old-time Hebrew school, commonly called Chedar, was once undoubtedly a great power and productive of much good in Israel. But it was a product of the Ghetto, and as such only in keeping with the general Ghetto life. Both the Ghetto and the Chedar looked unattractive.

With the Ghetto gone, the Chedar has become an anachronism. Modern Judaism can hardly work any good whatever with the systemless Chedar. Not alone our labor, but what is more precious, our Judaism, would be lost on it. What we need to-day is modern schools conducted along the same lines as the great public schools of the country. Some people of the Jewish population of this city seem to have fully realized the great need of such a modern Hebrew school, in that great pecuniary sacrifices and obstacles of a much stronger nature connected with the building of such a beautiful and up-to-date school as the one now being dedicated by us, did not deter them from having it erected. They may hope that the fruit of their noble endeavor will be great and productive of much good for the entire Jewish population of this city.

But here I cannot but sound a note of warning to the future patronizers of the school. Lack of system of the old time Chedar, and its general unattractiveness have resulted in the lack of respect on the part of our own people for Hebrew schools, Hebrew tuition, and Hebrew teachers, though the latter may be modern. Let the Jewish population of this city realize that the future success of the school will largely depend on their higher mental attitude toward it. Our youth will never respect the Hebrew school and its teachers to the same extent as they respect the public school and its teachers, and consequently will profit less by its attendance unless they are impressed at home with a more adequate idea of its importance and high standing.

We must in short, to use a Talmudical phrase, implant the beauty, the order, the system of Japhet into the tents of Israel. When we look at the ways and various institutions of Christendom, what harmony, what order, what sense of propriety is suffused over all of them. It is the perception of this as contrasted with the somewhat ghettoish aspect of our orthodox schools, institutions and synagogues, that tends so much to estrange American born and bred Jewish youths and maidens from their ancestral faith. We conservative Jews must meet this our disadvantage, or we shall constantly be losing ground.

So much for the formal side of the school. I may also be allowed to say a few words concerning the curriculum to be followed in it, which to be sure, must form its primary object.

Boys and girls attending this school and desirous to pass its entire course will have to attend it for seven years. They will be put through several classes. Starting from the rudiments of the Hebrew language, they will advance to the study of the Pentateuch, the Prophets, the famous Commentator Rashi and other subjects of Hebrew literature. It will be the endeavor of the teachers to make them grasp the greatness of our primeval classics, to show them, if only in a desultory way, what store of pearls is scattered among the seemingly chaotic and conglomerate mass of Talmudic and rabbinic literature, to thrill their hearts with the woeful facts of our singular history, and withal, to inspire them with the truth that ancient Judaism was the bed rock out of which the eternal verities and values of mankind were hewn. All this must have the ultimate end to keep them within the fold, that they may withstand the luring call of the sirens the more tenaciously the greater their allurement becomes.

And since it is not the so-called Christians who spell great danger through allurement to Judaism—except perhaps through brutal force they may employ to win us away from our ancestral faith, as in the case of Spain and Russia—but rather the good and noble and true and righteous in Christendom; the more, therefore, Christian nations at large advance, the more they soak the essence of Christianity into their lives, the harder must it then be for us to resist their allurement and their tacit reproach: "What for your particular existence, Jews? Your special mission is done. But the genius of Judaism speaks to the genius of its daughter religion:" Granted the special mission of Israel is done, but Israel is willed to live as nature is willed to continue its laws. Let them lead their particular existence. They will grow with the nations, advance with the nations, contribute their share to every spiritual domain of the nations. But as long as tribe speaks of tribe and nation speaks of nation, and as long as the ideals of Moses and the prophets are not verified among mankind to the very letter, so long will there be the people of Israel witnessing the continuously increasing light which its prophets once lit in ancient Judea.

COMPARATIVE STUDY OF CHILDREN'S IDEALS

By David Spence Hill

The ideals of children so far as they are revealed in writing the name of the person or character whom the child "would like to resemble" were the subject of the present investigation. The accompanying analyses, tables and curves comprise the various types of ideals. "Acquaintances," "Historic" or "Public Persons," "Characters from Fiction," "Religious Personages," "Ideals from Opposite Sex," are the general rubrics, with the accompanying subdivisions. (See Table I.) A total of 1,431 white children was included, pupils of two public schools of the City of Nashville, Tennessee. The schools are designated respectively as Groups T and H. The different analyses are:

1. Ideals at various ages, 7 to 15, of the 1,431 children, boys and girls of both groups combined. (Fig. I.)

2. (a) Ideals of 857 children (boys and girls combined) of Group I.

(b) Ideals of 574 children (boys and girls combined) of Group II. (Fig II.)

The analysis does not include consideration of motives. The answers to "Why," often argumentative or explicit, indicated the earnest nature of the responses in many instances.

PRELIMINARIES

Preliminary to the work described in this paper, data were got through teachers from some 400 children in three small schools. A child-study class of six members was divided into three couples, each of which analyzed the data. Enough help was given in class to insure uniformity in methods of tabulation. It was found convenient for each student to record the analysis in a composition-book, upon one page of which the rubrics for classification were written upon the left margin in vertical order. The corresponding margin of the remaining pages was cut away, so that two pages were available for each year or age recorded. This method was found much more practical than to use one large sheet of paper, and it has been followed throughout. The purpose

TABLE I.

Ages		7	8	9	10	11	12	13	14	15	Total
Number of Papers	Boys	54	67	92	95	98	96	79	71	37	689
	Girls	65	79	97	87	92	104	80	91	47	742
	Both	119	146	189	182	190	200	159	162	84	1431
Acquaintances	Boys	68.5	57.	47.	23.	20.	12.5	11.	10.	.0	27.
	Girls	86.	75.	62.	56.	46.	32.	37.5	34.	36.	51.
	Both	78.	66.5	54.5	39.	33.	22.5	24.5	23.	20.	39.5
Father or Mother	Boys	33.	19.	20.	7.	11.	6.	4.	.0	.0	11.
	Girls	28.	14.	15.5	10.	6.5	8.	6.	8.	.0	11.
	Both	30.	16.	17.	9.	9.	7.	5.	4.	.0	11.
Other Relative	Boys	15.	13.	6.5	3.	2.	.0	6.	.0	.0	5.
	Girls	9.	4.	4.	5.	1.	.0	4.	6.	.0	3.5
	Both	12.	8.	5.	4.	2.	.0	5.	3.	.0	4.
Other Acquaintance	Boys	21.	24.	21.	13.	7.	6.	1.	10.	.0	11.
	Girls	49.	57.	42.	41.	38.	24.	27.5	21.	36.	37.
	Both	36.	42.	32.	26.	22.	15.5	14.5	16.	20.	24.
Public and Historic Persons	Boys	15.	36.	40.	63.	66.	79.	85.	79.	95.	62. %
	Girls	3.	14.	24.	31.	38.	42.	41.	41.	42.5	31. %
	Both	8.	24.	32.	48.	53.	60.	63.	57.	65.	46. %
President	Boys	.0	.0	.0	3.	.0	1.	5.	1.	3.	1. %
	Girls	1.5	.0	.0	.0	1.	1.	.0	1.	.0	.5%
	Both	1.	.0	.0	2.	.5	1.	2.5	1.	1.	1. %
Historic American	Boys	11.	31.	33.	50.5	60.	71.	73.	72.	78.	54. %
	Girls	1.5	14.	22.	26.	22.	33.	27.5	30.	32.	24. %
	Both	6.	22.	27.	39.	41.5	51.	50.	48.	52.	38. %
Historic Foreigner	Boys	.0	.0	4.	6.	5.	2.	4.	3.	13.5	4. %
	Girls	.0	.0	2.	3.	11.	5.	10.	4.	8.5	5. %
	Both	.0	.0	3.	4.	8.	3.5	7.	3.	11.	4. %
Misc. Public	Boys	4.	4.5	3.	3.	1.	5.	2.5	3.	.0	3. %
	Girls	.0	.0	.0	1.	4.	4.	4.	5.5	2.	2. %
	Both	2.	2.	2.	2.	3.	4.5	3.	5.	1.	3. %
Character from Fiction	Boys	7.5	3.	9.	6.	5.	2.	1.	7.	3.	5. %
	Girls	9.	10.	12.	3.	10.	13.	11.	20.	13.	11. %
	Both	8.	7.	11.	5.	7.	8.	6.	14.	8.	8. %
Religious Persons	Boys	9.	4.5	4.	7.	8.	6.	2.5	4.	3.	6. %
	Girls	1.5	1.	2.	9.	6.5	12.5	10.	5.5	8.5	6.5%
	Both	5.	3.	3.	8.	7.	9.5	6.	5.	6.	6. %
God	Boys	5.5	.0	1.	5.	.0	1.	1.	.0	.0	2. %
	Girls	1.5	1.	1.	.0	1.	2.	4.	.0	.0	1. %
	Both	3.	1.	1.	3.	.5	1.5	2.5	.0	.0	1.4%
Jesus	Boys	.0	3.	1.	2.	3.	4.	.0	3.	3.	2. %
	Girls	.0	.0	1.	8.	4.	10.	5.	5.5	6.	5. %
	Both	.0	1.	1.	5.	4.	7.	2.5	4.	5.	3.4%
Persons from Bible	Boys	4.	1.5	2.	.0	5.	1.	1.	1.	.0	2. %
	Girls	.0	.0	.0	1.	1.	1.	1.	.0	2.	1. %
	Both	2.	1.	1.	.5	3.	1.	1.	1.	1.	1. %
Opposite Sex Chosen	Boys	17.	21.	15.	11.5	6.	7.	1.	1.	.0	9. %
	Girls	11.	15.	32.	34.	39.	43.	42.5	34.	36.	32. %
	Both	13.	18.	31.	22.	22.	26.	22.	20.	20.	21. %

of the writer in utilizing the unsatisfactory data of the preliminary text was not for any expected value of content, but rather to enable him to develop expeditious methods of handling such data through the medium of class work. It also

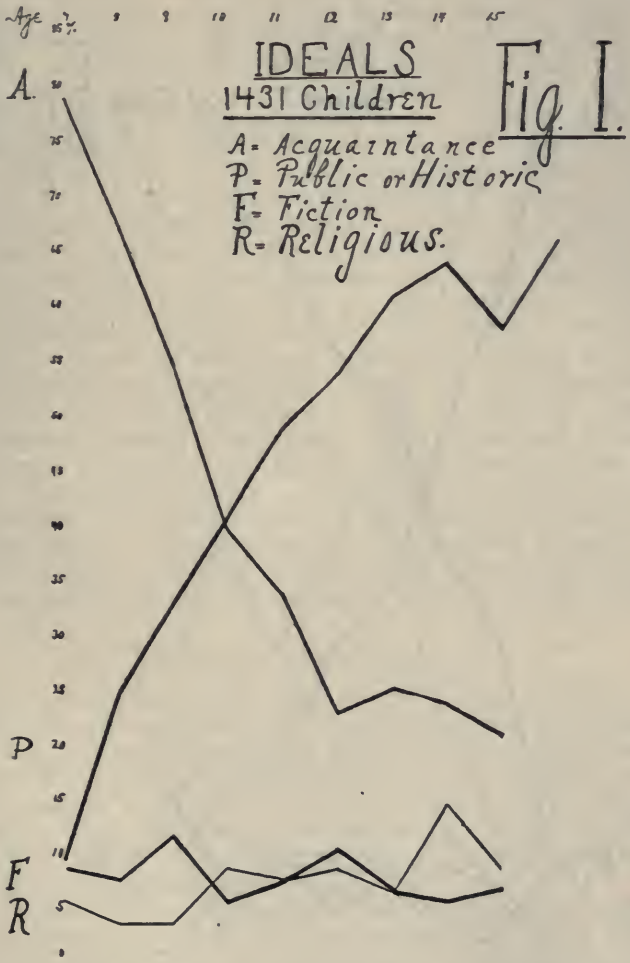


Fig. I.

was in response to the suggestion that the element of subjectivity of opinion in the observer played a too large part in some of the earlier child-study researches, and that some of these had not even been submitted to the precaution of having analysis and calculations made by a second person. Space does not warrant the publication of the results of this preliminary test as related to the subjectivity and to the inaccuracies of the three pairs of workers. Suffice it to note that, although encouraged to care and accuracy by the instructor,

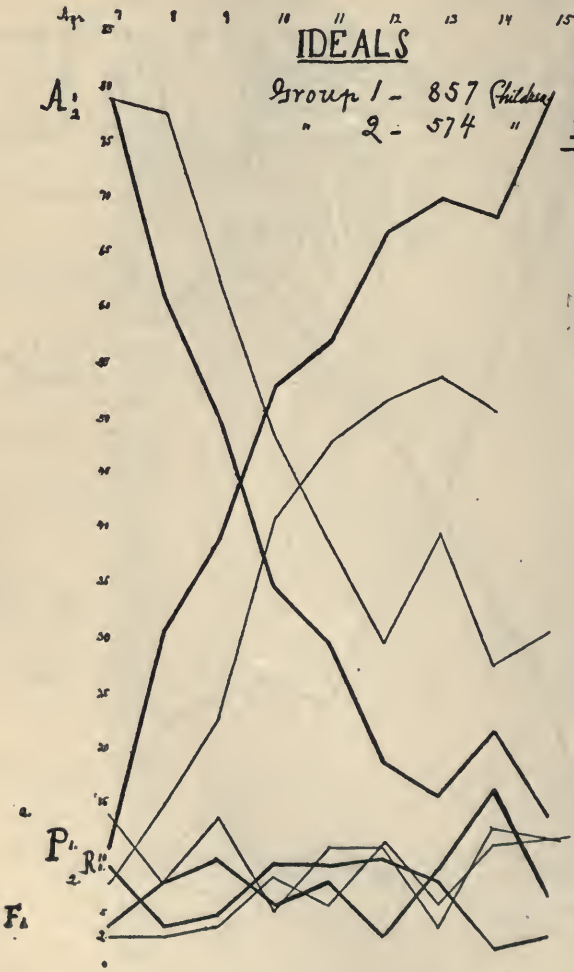


Fig. II.

the graphic representations made by the students revealed several points of difference ranging from one to eight per cent, differences attributed to varying classifications, and to mechanical inaccuracies. Each member of this class had done at least minimum college work in the sciences—physics, chemistry, biology, psychology.

The present larger study is based upon papers secured from white children in schools in opposite localities of the city. One school is situated in a somewhat new and popular residential section; the other in an old but, perhaps on the whole, less prosperous locality. Printed blanks were used upon each of which was printed the question: Which person (among those you have seen, or thought of, or heard of, or read about), would you most like to resemble? Why?

The writer instructed the teachers who gathered the data how best to avoid in the children suggestion, imitation, frivolity; and he explained the necessity of obtaining serious, spontaneous replies. Confusion or irregularity in distributing and in collecting the papers were to be guarded against. In the case of the youngest children with whom handwriting was difficult, the teacher was to question each child individually and herself record the answer. To this end a conference was held with the principal and teachers, after school upon the day preceding the test (Spring of 1910). At the conclusion of the explanations a typewritten circular repeating the careful instructions already made orally, was given to each teacher, and along with it the package of question-blanks for her pupils. The replies were gathered promptly, and after division into bundles according to sex, by the teacher, were returned to the writer. The precautions taken and the interest and carefulness of the teachers led to the opinion that the papers are as reliable as can be expected in such endeavors with children.

Comparison of Methods

The assumption (as by Barnes and Goddard) that "100 papers of each age of each sex is the most satisfactory number" could not be tested exactly by means of our material, owing to the fact that using this method we were able to muster only 100 papers for each age, 50 of each sex, for practice work by a college class. However, the material was worked over and classified, and the calculations of the two methods were made separately by different persons.

In the first instance the writer alone analyzed the data for both groups combined and also separately for each school. He found the percentage for each item in each age by using the actual number of answers received. An inconsiderable number of blanks (one to four) at each age, "(no answer)" papers, were returned according to instructions, except in the case of children seven and eight years of age. It was reported that practically all of the children replied except in case of these youngest children, the answers of whom the teachers recorded after individual questioning. It was difficult to obtain the full quota therefore in the lowest grades. Our calculations are based upon the actual number of replies as principals rather than upon the whole number of children in a room since it was believed that the error of selection within the school was confined almost entirely to the two lower grades; and this was due to limitation of time rather than to choice. Goddard—(*Ped. Sem.*, Vol. XIII, No. 2, p. 209) includes those "not answering" in his principals.

In the second instance 50 papers of each sex and age were used—making a total of 100 for each age. Here the group of college students were put into service, they utilizing the work for class room use. The aim was to furnish a comparison with the "actual number" method of calculation used in the first instance, as well as again to modify the factor of the subjective opinion of the writer who made the analysis above. In this second analysis the replies were read carefully before four students by the instructor or a pupil, and each student kept her own record; debatable points of classification were decided by vote after discussion. There is of course an advantage in time and speed where 100 papers of each are taken. The first method involved tedious copying, checking and calculating of hundreds of percentages all of which had to be gone over more than twice to insure accuracy. The actual results in our case got by the two methods do not differ considerably.

We shall use in what follows the percentages used for Fig. I. This shows in detail the percentages after combining the two groups—a total of 1,431 children from 7 to 15 years of age. The number of papers from 16 to 17 years was not large enough to be used—(They are indirectly *prima facie* evidence of cases of retardation). (See Table I.)

THE CONTENT

1. *Father and Mother.* The presence in consciousness of father or mother as an ideal is represented at the different ages for each sex as follows:

TABLE II

	Tennessee	7	8	9	10	11	12	13	14	15	years
Father or Mother as Ideals	Boys	33.	19.	20.	7.	11.	6.	4.	0.	0.	
	Girls	28.	14.	15.5	10.	6.5	8.	6.	8.		
	Both	30.	16.	17.	9.	9.	7.	5.	4.	0.	
	California (Barnes)										
	Boys	14.	10.	10.	8.	2.	1.	1.			
	Girls	23.	17.	11.	11.	6.	6.	8.			
	Both	18.5	13.5	10.5	9.5	4.	3.5	4.5			
	German (Goddard)										
	Boys	58.	34.	36.	22.	12.	10.	4.	14.		
	Girls	29.	33.	17.	16.	12.	15.	17.	10.		
	Both	43.5	33.5	26.5	19.	12.	12.5	10.5	12.		

Our results tally with other investigations in that (1) parental influence seems to diminish with age (2) with other American investigations in that father and mother are mentioned less frequently than in the German group of Goddard. Our figures do not show age for age, that either boys or girls largely predominate in this choice. It has been lamented that the large choice of parent or acquaintance as ideals is symptomatic of "narrowest sort of life," although it is also averred that we do not know "the best rate of expansion of the child's personality." To the contrary, where home life is wholesome—a large choice of such ideals seems to us ethically desirable. A large and earlier choice of public characters might be evidence of anything but normal "development of soul"—but rather of disillusionment, precocity or where the influencing personalities are unworthy, the exchanging of one's birthright for a mess of pottage. It depends upon the home and the kind of parent. The enumeration of historic and public characters about to follow indicates for our children a wide and rich range of ideals, with exceptions; nevertheless in a country whose people notably cherish home life, I should have preferred to see our percentages of preference for father or mother higher than they are.

2. *Other Acquaintances, playmate, teacher, etc.* The sex differences in regard to choice of "other acquaintances" as ideals are as follows:

Girls obviously predominate in this choice (37% as compared with 11%). The results agree in general with other American studies.

3. *Historical or Contemporaneous Public Persons.* Not including Bible characters, under this division the boys lead throughout, age for age; or as totals, boys, 62% compared with girls, 31%. This is similarly true in both groups. In this list are included some (about 12) miscellaneous public characters, vaguely defined as "actor," "fireman," "great soldier," etc. Historic or public Americans predominate.

The actual characters mentioned by both boys and girls are as follows. The figures are numbers of papers.

	Boys	Girls
Geo. Washington	213	102
Robert E. Lee	37	5
Andrew Jackson	15	4
Sam Davis	15	3
Roosevelt	14	1
President	12	4
Rockefeller	11	2
James Robertson	8	13

Columbus	6	6	
Lincoln	6	3	
Longfellow	5	17	
Edison	3	1	
Stonewall Jackson	3	1	
Rosa Bonheur	3	4	
Shakespeare	2	1	
Senator Carmack	2	1	
Robert Fulton	2	1	
Bonaparte	1	1	
Charles Kingsley	1	1	
	359	171	Total 530.

CHARACTERS MENTIONED BY BOYS ONLY

John Sevier	4	Marion Francis	2
Daniel Boone	3	Cabot	2
Eli Whitney	3	Dr. Cook	2
U. S. Grant	2		

Mentioned once each: Socrates, Michael Angelo, Bruce, Farragut, General Forrest, Patrick Henry, W. J. Bryan, Eugene Field, R. L. Stevenson, E. A. Poe, Dickens, Prince Albert, John Stuart, President Elliot, Lewis Carroll, George Wright, and O. Wright, Andrew Carnegie, Marshall Field, Magellan, Capt. Lawrence, Dave Warfield, Tom Thumb, Kermit Roosevelt, Mrs. Alice Hegan Rice, Flanders (Auto man) Ellis (writer) Miscellaneous 15. *Total 61.*

CHARACTERS MENTIONED BY GIRLS ONLY.

Martha Washington	3	Peary	2
Walter Scott	3	Missionary	2
Clara Barton	2	Mozart	2

Mentioned once each: Mrs. John Sevier, Mrs. James Robertson, Pocahontas, Joan of Arc, Queen Wilhelmina, Queen Isabella, Alice Cary, Cecil Chaminade, Whittier, Bulwer Lytton, Augusta E. Wilson, John Trotwood Moore, Alex. Campbell, Peter, Prescott, Helen Keller, W. A. Dromgoole, General Greene, Queen of Servia, Bertha Clay, Helen Taft, Halley, Patti, Calvé, Beethoven, Hans Andersen, Prince Henry, Annie Fellows Johnson, Marvin Evans, Rev. Jones, *Miscellaneous 8*. Total 54.

The above lists are an array in which it is difficult to find more than two or three ignoble characters—such as Cook and Jeffries—trivial exceptions. The variety of heroes, pioneers, statesmen, writers, artists, soldiers, musicians, sailors, inventors, men of business, represents the content of some of the world's best biography—and we have not included in the above lists distinctly Bible characters. This wide range, while attesting individuality of choice and considerable culturistic environment, nevertheless is surprisingly short or scattered, when the writer recalls that Nashville and Tennessee are rich in historic interests and celebrated characters, whose memory there is perpetuated upon the printed page, by tradition, in story and by mouments. It would seem natural that strong and historic characters of the South such as the following would appear more active in the consciousness of these Southern children: Robert E. Lee, Abraham Lincoln, Andrew Jackson, Sam Davis, James Robertson, Stonewall Jackson, John Sevier, Daniel Boone, Farragut, Henry Clay, David Crockett, not to mention scores of contemporaneous characters from Tennessee, eminent in other states.

The opportunity exists in Tennessee as elsewhere to build more upon the circle of interests nearest home a discriminating sentiment and inspiration for the strong and heroic in human life.

4. *Characters from Fiction, Myth and Story.* There is evident, as in other studies, the comparatively slight influence of fiction-ideals. (See Figs. I and II.)

As glaring exceptions the influence of the cheap novel appears. These heroes of the novel are relatively unimportant and many more excellent characters are mentioned; there is evident, as in other studies, an obvious lack of the rich material of myth, legend and folklore, with which the creative imagination of particularly younger children might be fed, if the material available amongst our people could be edited, selected and utilized for the good of the children. Fiction seems to influence the girls more than the boys in each group. Combining the groups, 11% of the girls and 5% of the boys chose deals from fiction.

Named by the boys there appear: William Tell 5, Crusoe 5, Fairy 5, Robin Hood 4, Miller of Dee 2; once each—Gabriel, Hiawatha, Rip Van Winkle, Alice in Wonderland, Rebecca of Sunny Brook, Capt. Kidd, Santa, Bear Hunter, Red Men, L. Grant, Herbert Carter, "Henry," R. Whitney—*Total 34.*

A more varied list is made by the girls: Little Colonel 16, Elsie Densmore 6, William Tell 3, Evangeline 5, Cinderella 3, Red Riding Hood 3, Santa 3, Snow White 2, Silver Locks 2, Queen 2; once each, Aladdin, Crusoe, Rose Red, Rose Campbell, Elizabeth, Hiawatha, Benn Starr, Dora Dene, Genevia, Grace Darling, Fairy, King, Queen, Jewel, Elaine, Girl in S. S. Story, Caroll Bird, Dorothy in Wizard of Oz, Dorothy, Dorothy Dainty (adv). Barefoot Boy, Fairy, Lady in Fairy

Book, Princess, Mrs. Wiggs, St. Valentine, Minnehaha, Tar Baby, Clara in Mammon, Contented John, Mrs. Wentwood in Burglar's Daughter, Fanny in Tempest and Sunshine, Indian Princess, Betsy Lewis and Missy in Little Colonel books, "Girl,"Grace Darby, Jack in the Bean Stalk, Alice Longfellow. Total 85.

5. *Religious Characters.* The convenient tabulation of Goddard (*Ped. Sem.*, *loc. cit.*) shows the relative position of the distinctly religious characters including God, Jesus, and Bible characters as observed in similar investigations in different parts of the world. Our percentages are likewise small. The general agreement of all these studies is that religious characters are named with the least frequency as compared with ideals chosen from acquaintances, public persons or fiction. This consensus demands the attention of the forces of organized religion whose vocation is to keep alive the spirit of religion. Several hypotheses may be offered to explain this paucity of ideals. (1) The low percentages for religious characters is about proportionate to the relative time and effort spent upon Bible and religious study by the average child, as compared with the work of the day school. Once a week at Sunday school as compared with every day at the public school can hardly yield much greater results. One cannot assert, at least upon the basis of these figures, that the actual teaching method of the Sunday school is totally ineffective, when the amount of time available is considered. (2) The home evidently is not successful to-day in arousing permanent admiration for Bible and religious characters. (3) Perhaps these characters are felt by the child as being remote, intangible, inapplicable to present day conditions. Orthodoxy does not emphasize enough the human side of Christ and therefore the child may not place Jesus in the category of "persons." If all this be true, we have here a new emphasis upon the need for a social application, for a modernization of the gospel interpreted to cope with present conditions. (4) A reticence in mentioning "religious characters" doubtless is one factor. If the data were got within the walls of a Sunday school room, perhaps results might appear very different.

For making more vital the influence of the religious and moral heroes, the present writer ventures to suggest to sincere religionists the following practical expedients. For adults let there be organized classes or societies in our churches for the purpose of studying and investigating the actual social conditions in local communities, as regards the problems of poverty, sanitation, public and benevolent institutions, as jails, hospitals, asylums and the problems of civic improvement. This will bring to light the demands for applied religion. Then for children let there be tried more fully a revival of the ancient art of story telling to make more vivid and permanent the character—ideals through which as personalities it is desired to convey the chosen principles of applied religion. The method of the story was the method of the great Teacher

Opposite Sex Chosen

The often remarked fact brought out by the results of Barnes and Goddard that girls choose male ideals to an undesirable extent appears again in our returns. Of the girls, 32%, and of the boys, 9% chose as ideals characters from the opposite sex. It is surmise to state whether this is due to growing dissatisfaction with the limitations traditionally as well as naturally restricting women, or due to there being more male ideals to choose from. Perhaps both factors are operative. It appears to the present writer that we do not stress enough in story, reading, picture, and song the noble qualities of available female characters contemporaneous and in history.

That the male ideal is commonly made more conspicuous in history and in current events, and that the imitativeness of the child is affected through the examples most vividly presented—rather than by some peculiar dissatisfaction with her sex, seem adequate hypotheses to explain this choice of male ideals by the average girl. In order to point to these factors, however, one need not deny that a sense of ill-adaptation to cope with the demands of life is too common in some young girls because of our artificial modern environment.

Groups T and H Contrasted

At every age the children of Group H lead in the choice of Acquaintance-Ideals. Totals: Group H, 47%, Group T, 34%. At every age Group T leads in the choice of Historic or Public Persons; Group T, 52%, Group H, 37%. In each group Religious or Bible ideals total about 6%. The earlier years of childhood in Group H and the later years of Group T seem the more influenced by such characters.

In regard to the use of data of this kind for minute comparisons of groups, races, etc., the present writer is not enthusiastic. It seems questionable whether any but the largest and most obvious differences in these curves should be given weight in contrasting the characteristics of national or racial groups, particularly when slightly different methods may have been used. The summarizing curves exhibited by Goddard therefore, of German, New Jersey, California, and Minneapolis studies must be used with caution. Such curves of group data are extremely sensitive to the element of imitation or suggestion and therefore minor variations at any age must be checked by more studies before we indulge in dogmatizing. Upon the face of our returns it may be seen that there is about as much difference between our two groups in the same city and of same race as there is between results got in different states or countries. Waiving fine points of difference in these crude studies, we may find some facts of general agreement or of comparison. (See Fig. II.)

CONCLUSIONS

1. *Practical value to students of pedagogy.* Whether one catalogues studies such as the above as of "human nature," "ethics," or "psychology" it appears that considerable value may be gained by the moderate expenditure of time upon similar studies by classes in education. A statistical study of ideals of school children appeals to the writer as belonging properly to the sphere of experimental pedagogy, since it acts as a test to reveal a crude portrayal of some of the actual results of educative procedure. The material of such a group study is more illustrative, suggestive and stimulating than conclusive and is doubtless unusually sensitive to the influences of suggestion and imitation. A variation at a given age, especially in moderately large groups, might be due more to the contagion of a whispered suggestion influencing a dozen or more children than to the designated factors. Furthermore, the age error makes only approximate, within six months, the years named. Other questions may be raised, *e. g.*, the psychological nature of the complex mental fact we are attempting to measure; and it might be interesting to contrast the results of several repetitions of this test of ideals made at intervals upon the same group of children in order to observe the reliability of a single performance of the children, or upon similar groups in dissimilar surroundings. It would be unwarranted to generalize upon fine points of difference. The large general differences and tendencies in childhood verified in the case of large groups, however, seem well established, *e. g.*, the diminution of acquaintance ideals, the multiplication of ideals from public characters, and the paucity of religious characters cited. Without overestimating the value of this one example of the class of work, we would suggest its revival and repetition.

As practice work, where the easier method of calculation is used, a repetition of this early child-study investigation seems worth while, because one can utilize within a few days' time the data for class work. Aside from the consideration of the specific topic, some indirect benefits have accrued in the experience of the writer with small groups of students, in that the work naturally gave rise to discussion of statistical methods, to an attempt to devise standard procedure, to the sifting of generalizations, and the developmental process was illustrated by the resulting curves.

2. *Ethical value of study of ideals.* A simple study of the ideals of a group of children offers some other values to students of education. Educational psychology and experimental pedagogy are concerned chiefly in learning *how* to make changes in human beings. What kind of changes to make or the what and the why are equally important problems lying within the domain of ethics, although metaphysical inquiries regarding morality do not seem to produce much good fruit. We catalogue in our histories of education the characteristic aims of races or peoples, such as the "passivity" of the East, the "activity" of the West, the "culture," of the Greeks, the "efficiency" of the Romans, the "discipline" of the Middle Ages, or the ideals of knowledge, development or character as we follow Comenius, Rousseau or Herbart. Perhaps we formulate as the modern aim of education the resultant or synthesis of such of the above elements as are desired for social life, the emphasis upon each to depend upon the exigencies of time or place. But this is not enough for students of education, for they should realize that the individual boy or girl must with more or less distinctness formulate those mental complexes known as our ideals, patterns or standards. These are the products of habit, and ideals focalized may in turn start new habits. They are an essential part of the developmental process as the child and his environment change. It seems, therefore, that such simple studies as the above present some added points of value, because with moderate effort upon the part of the student they forcibly bring to his attention typical data fresh from the minds of children; and concrete data are what force to recognition many of the questions of the *what* and the *why* in education in addition to the mere *how* of the experimentalist.

TWO THOUSAND NORMAL CHILDREN MEASURED BY THE BINET MEASURING SCALE OF INTELLIGENCE

By HENRY HERBERT GODDARD, Ph. D., Vineland, New Jersey

Since the first publication of the measuring scale by Binet and Simon there have been few tests of the scale itself upon groups of children. Prof. Decroly and his associates in Belgium have made the most important contributions. But these have been upon small groups and rather select. Our own testing of four hundred feeble-minded children was the largest use made of it upon defectives.

It seemed very desirable to have the experience of this test upon a homogeneous group of normal children. With this thought in mind, arrangements were made in the fall of 1910, at the beginning of the school year, to test the entire school population of one complete school system. This system includes about five thousand population within a small city and as many more outside, so that we have, city and country, a school population of about two thousand children. The city referred to is, as will be seen, a small one, and not it is true, widely different from the country except that the population is not of course engaged in farming.

The tests were made by five assistants from the Research Laboratory of the Training School at Vineland. These persons were all expert in the use of these tests, having been trained in the laboratory. The method of procedure was for two or more teachers, according to the number of rooms in the school, to go to a school and test out the children there, at one sitting if possible. In a very few cases it was necessary to go back a second time. The examiner was provided with a small table and a couple of chairs in an ante-room or in the hall. When everything was ready the teacher sent out a child, who was tested and returned to the room, when another child came out, and so on with practically no disturbance of the school. The work began always with the lowest grade so that if there were any tendency for the children to tell the others it would be minimized because the younger children could not tell the older ones anything about their questions. However, experience proved that there was practically no attempt to coach any children in regard to the answers. Indeed such coaching would have been largely useless because no answer was ever criticised and the child was made to feel that his answer was satisfactory, therefore had no reason to look it up or talk about it, and, if he told another child, was as likely to tell a wrong answer as a right one. A few cases where there had been some telling, evidently without any thought of dishonor, the child who had thus been told was found to be unable to retain what had been told him, *if it was something that was beyond his normal mental age.*

In other words, there were obtained in these cases, evidences of two things: first, that the Binet Scale was wonderfully accurate; and second, that a child cannot learn the things that are beyond his grade of intelligence. He may be drilled upon them but can only give rote work and will fall down upon them if carefully questioned. So that the whole matter of the children explaining to each other was practically without any influence upon any of our results.

The examiners, while all more or less trained, differed considerably in experience so that the result was that the number tested in the school day varied from twelve to thirty at the beginning. Those who did twelve rapidly increased in the number they could do, while those who did thirty were practically at their maximum at the start. No children were tested at recesses or outside of school.

In the seventh and eighth grammar grades and the high school, the children were tested in groups, the papers being given out to them at their desks and they turning them right side up at the signal and beginning to answer the question. The results in these grades will be considered later in this paper. All others were done individually.

We were interested to discover to what extent the personal equation of the examiner affected the results and accordingly on each second day for the first week and a half, the work of each examiner was subjected to examination, by drawing the curve of distribution for her cases. With the exception of one case, where the method of crediting one question had been misunderstood, the differences in the different examiners was practically a negligible quantity so that it was entirely safe to put all the results together and compare them as though they had been made by one examiner. This was an important item since it demonstrated that the value of the tests is not noticeably affected by the personal equation—provided of course the examiners have mastered the method and are temperamentally fit for such work with children.

The method of procedure by each examiner was usually to say "Do you want to come and play with me? Let us look at these pictures," and then to begin by showing the child the pictures of test number 4 for three-year-olds and also number 6 for seven-year-olds. The way in which the child received and talked about the pictures would usually enable the teacher to determine about where to begin. If she was uncertain from this she would probably begin with the questions set for the child's age. If the child failed on any of these questions she would go back a year, and if a child answered these questions she would go on with the next year and so on until she was sure the child's limit had been reached. No attempt was made to have every child answer all of the questions for all ages since the purpose of the examination was primarily to determine the mental condition of the child, whether normal, backward, or precocious.

If the child was backward, then the examiner went back until she found that the child could answer at least all but one for the given year.

It may be stated in passing that none of the fears that naturally arise in the mind of one who is new to the method was realized. The children almost without exception were eager for the tests, did their best and were much pleased with the result. That was true whether they were *at age*, *above age*, or *below*. Of course part of this was due to the method because the child was *never scolded*, was never even told that he had failed, but *always encouraged*, told even that he had done well, the examiner considering that whatever he did, was well for him. If the child made a mistake so obvious that he was conscious of it himself, the examiner passed over it as lightly as possible, mentioning something that would be a good excuse for such a slip, and so making the child comfortable. In this way we believe that we got the best from every child that was examined.

The results, so far as the children in the first six grades are concerned, are shown in the following distribution curve, whereon is seen that five hundred and fifty-four children tested exactly *at age*. That is to say, they did the questions for their respective ages. Three hundred and twenty-nine tested one year above, and three hundred and twelve tested one year below. Again forty-nine were two years above the average, fourteen were three years above, and two were four years above, while one hundred and fifty-six were two years below; seventy-nine three years below; thirty-seven four years below; eight, five years; six, six years; and one seven years below; making a total of fifteen hundred and forty-seven in these six grades, who were tested.

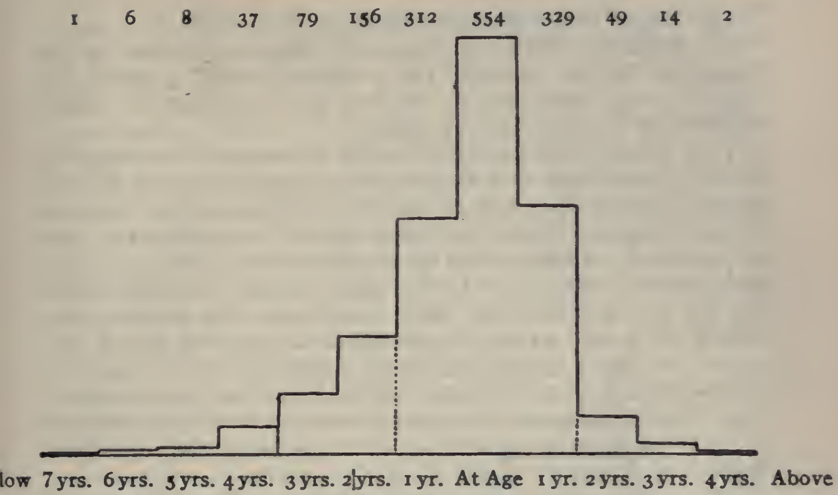


CHART I.

Table I shows the distribution of the entire 1,547 children in *mental* age and physical age.

One sees just how many were backward "at age" and precocious for each physical age.

TABLE I

Age	Mental Age*												Totals
	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	
4 yrs.		1	**2**	2	3								8
5 “	2	4	8	**40**	40	16	4						114
6 “	1	0	3	29	**48**	69	9	0	1				160
7 “	0	1	2	8	15	**114**	50	4	3				197
8 “			2	2	1	87	**86**	16	12	3			209
9 “						27	54	**56**	58	4	2		201
10 “					3	15	24	19	**124**	27	8	2	222
11 “					1	4	13	25	50	**60**	12	1	166
12 “						4	10	13	42	36	**39**		144
13 “						1	5	6	30	19	21	**7**	89
14 “							1	1	6	5	4	3	20
15 “								3	0	1	2	0	6
Totals	3	6	17	81	111	337	256	143	326	155	88	13	1547

---

* In these tables Roman numerals stand for *Mental Age* as determined by the Binet tests. Arabic numerals when used for *Age* denote physical or chronological age.

The heavy faced figures show those "at age."

For example, of the four-year-old children, 1 tested to the mental age of III, 2 tested IV, 2 tested V, and 3 tested VI, that is to say, they had the mental development of average children of those respective ages.

To a person familiar with statistical methods the foregoing curve of itself, amounts to practically a mathematical demonstration of the accuracy of the tests. The results could not arrange themselves on this curve, which is recognized at once as practically a normal curve of distribution, if the questions were not carefully graded. Secondly, if they were not right, age for age, but were too hard or too easy, the largest group would not be one *at age*, but would be a year below or a year above according to whether they were too hard or too easy. Consequently, we are forced to the conclusion that the questions that Professors Binet and Simon have selected are well graded, at least from the ages of five to twelve, and that they fit the ages to which they are assigned.

The significance of these figures obtained from the general results is very great. There is every reason to believe, and statisticians confirm this, that any group of two thousand children may be taken as a fair sample of conditions to be found in any number of children in any country. Consequently, whatever proportions or percentage are found here may be taken to be very closely the standard to be found elsewhere.

Bearing this in mind it becomes very significant when we find that we have 78% of the children practically normal and satisfactory—for we allow those children who are one year above and one year below to pass with the central group as satisfactory children. It is probably true that in a school system which is ideally conducted, where the superintendent has sufficient help to do all that he wishes to do, these children a year ahead and a year below would be looked into a little closer to see if there was any reason for this. But in the main, it is not a significant difference. But when we come to those that deviate more than that, we have conditions that are of importance. Of those more than a year above age, we have 4% and this is certainly significant. Four per cent. of the children in the first six grades of our public schools are especially well endowed,—what Whipple has called "gifted" children. They are born with a better brain or better protoplasm so that they have better endowments and greater capacity for doing school work. There seems to be no good reason why we should not recognize this and utilize it in our school work, giving these children the extra advantage which their natural endowment enables them to use, giving them a broader experience and a broader education as they go through the grade. This probably does not mean that they should go through the grade faster, but that the course should be richer as they go.

On the lower side of the curve, we have first, those who are *two* and *three* years behind age. Experience teaches us that these are probably what we call *merely backward*. That is to say, they are not permanently arrested in their development. They constitute, as will be seen, 15% of the children in the first six grades. They need help and with help they may be advanced to come up to the normal, or if always slow, nevertheless they can learn enough to be useful and respected citizens, but they must have special help. The Special Class for the slow child is needed for these.

Then we come to those that are four years or more behind their "age", and here again experience is conclusive that children who are four years behind are so far back that they can never catch up, or in other words, they are where they are because there is a serious difficulty which can never be overcome—they are feeble-minded. These constitute 3% of the children in these grades. We shall not stop here to discuss the social significance of this and its importance to all students of social problems.

Educationally the conclusion is forced upon us that it is very unfair to the normal child to keep these children in the same class with him. They should be segregated and given a special teacher who understands their case and is allowed to train them as their mental condition will permit. Of course, ultimately they ought all to go to the institutions for the Feeble Minded where they will be cared for and prevented from contaminating society; but until this can be done, the special class for defectives is probably the wisest solution.

As already said, the curve shown, demonstrates the remarkable accuracy of the Binet measuring scale, but we were not quite content with this. We desired to know whether every question in the list was one that was rightly placed, because such is the skill with which the plan has been worked out by Binet that his method of counting enables one to state the results with great accuracy. In other words, the scale is very flexible. Prof. Binet provides that the method of counting shall be that a child is credited first with the mental age at which he has answered all of the questions but one: he is then to be advanced a year for every five questions that he can answer beyond that point, no matter where they are found. This, as we have said, gives a flexibility to the system which overcomes any peculiarities of training that the child may be subject to, and so he measures up to his proper grade regardless of any accident in his training. But that being the case, it is still possible that some of the individual questions may be too hard or too easy for their age.

With the purpose of determining this, we have gone over every answer that has been given to every question and drawn up tables for this to determine just what percentage of children at the various ages can answer the different questions. The results of this are shown in the next table. (II.)

TABLE II

Physical Age	5		6		7		8		9		10	11	12	13
Mental Age														
III														
1	1	1	1											
2	1		1											
3	1		1											
4	7		7		1	1								
5	5		3		2									
IV														
1	14	1	5											
2	14		4											
3	13	2	5		1									
4	14		4	1	1									
V														
1	32	2	20		8									
2	23	11	22	3	10									
3	20	12	14	5	7									
4	30	4	18		8									
VI														
1	15	17	35	8	30	4	4							
2		21	5	27	7	20	2	3						
3	14	11	31	9	32	2	4							
4	9	6	35	6	23	2	7							
5	5	5	25	7	32	3	4							
6	13	13	35	8	39	2	7	1						
7	14	11	30	12	43	4	3	1						
VII														
1	3	3	24	14	87	9	34	3						
2		5	15	25	96	5	42							
3		1	4	18	88	10	37	2						
4	2	4	17	22	95	8	36	3						
5		1	7	27	77	26	36	7						
6	6	3	18	19	83	25	41	3						
7	2	1	24	9	94	5	34	1						
8		1	10	20	90	17	39	3						
VIII														
1				1	2	26	33	48	13	5				
2			1	4	46	49	79	14	17					
3		2	8	6	97	5	90	1	17					
4				1	17	47	74	15	16	1				
5					1	21	34	40	10	4				
6				1	52	16	87	2	17	1				

TABLE II—*Continued*

Physical Age	5		6		7		8		9		10		11		12		13	
Mental Age																		
IX.																		
1					1	20	49	33	48	7	4							
2					13	11	85	4	55		2		1					
3						1	11	38	33	23	3		1					
4			1		1	3	19	27	45	27	3							
5						1	7	22	43	10	2	1	1					
6					1	1	16	24	44	11	3	1	1					
X.																		
1						1	11	6	48	6	102	3	14		2			
2							5	4	31	14	104	5	10		2			
3								1	11	27	92	17	13	2	2			
4									21	13	98	8	8		2			
XI.																		
1								1	7	10	67	34	48	4	3			
2									1	8	41	51	39	14	3	2		
3										1	8	10	35	3	3	1		
4										8	20	71	37	16	5			
5										2	9	28	35	9	3	1		
XII.																		
1										1	8	29	23	28	37	7	2	1
2								1	2		18	7	45	5	44		3	1
3												8	5	30	15	21	2	2
4												1	20	3	40	3	2	1
XIII.																		
1												1	4	8	10	29	4	1
2													2	3	7	17	4	1
3														4	7	17	4	1

EXPLANATION OF TABLE II

The left hand column gives mental age in Roman and the questions under that age in Arabic. For instance, V 1 means five years, first question. In the columns headed by Arabic numerals from 5 to 13, which stand for physical age, the first figure gives the number who answered that question correctly, the second figure, those who failed. For instance, in V 1, 32 succeeded, 2 failed at the physical age of five years, *i. e.*, they test "at age." They are five years old and they do the tests prescribed for five years. The next column to the right shows what six-year-old children do with the same question:—20 succeed, 0 fail. In the same way we may see what proportion of children younger than "at age" have succeded. For instance, in VII 3, we have "at age" (*i. e.* seven years) 88 to 10. Six-year-old children give 4 to 18, and eight-year-olds, 37 to 2. This shows that the question is rightly placed since it is too hard for six years—only 4 succeeding while 18 fail.

We consider that a question is misplaced in the scale if it is not answered correctly by about 75% or more, of those trying it.

It will be seen now, from looking over this table, that the following questions are misplaced because they are too hard. Question VI 2—the success and failures are "at age" 5 to 27, one year older, 7 to 20, two years older 2 to 3, so that even for children eight years of age, the question does not seem to be answered by even half, although the numbers here are of course too small to be very significant. Question VIII 1 is answered by 33 while 48 failed; one year older, 13 succeed and 5 fail. It is clear that this question is too hard for eight years. Again question VIII 5 is answered by 34 against 40 who failed, but one year older 10 succeeded and 4 failed. It should be transferred to a later age. Question XII 3 is answered by 15 while 21 failed. At one year older, the record is 2 and 2. IX 3 gives 33-23. More succeed than fail but the proportion is not large enough.

These five questions are the only ones that are positively too hard and should be transferred to a later year or else modified to make them easier.

Turning now to examine any questions that may have proved too easy, we find question VIII 3 is answered by 20 while 1 fails. Children one year younger answer this in the proportion of 27 to 5, and even two years younger in the ratio of 8 to 6. It is clear that we may safely transfer this to seven years. IX 2 is answered by 55 while 0 fails. One year younger, it is answered by 85 to 4, and two years younger by 13-11. This should be removed to eight years. Question X 1 is answered by 102 to 3, one year younger, 48 to 6, two years younger, 11 to 6. This, like the last one mentioned, should be put at least one year back. Question X 2 is answered by 104 to 5, one year younger, 31 to 14, two years younger, 5 to 4. XII 2, 44 succeed, 0 fails. One year younger, 45 succeed, 5 fail; two years younger, 18 succeed, 7 fail; three years younger, 3 succeed, 0 fails. This should be removed to one year younger.

The results given in Table II were those obtained by children, all of whom were graded "at age." That is to say, while a child may have failed on one question, he on the whole passed that age.

It seemed worth while to determine whether the same ratio approximately would hold good for those who were *above* and *below* age. We have consequently worked out the same problem for those who were one, two and three years above and below age. That is to say, if a child is nine years old actually but tests only six, how has he succeeded with the six-year-old questions. Have such children, on the whole, succeeded and failed in about the same ratio as the children who are physically only six years?

An illustration will make the problem clear. Take question VI 1. By the children who are "at age" it is answered correctly by 35 while 8 fail. Of those who are a year above age (*i. e.*, precocious) 34 succeed and 8 fail, practically the same proportion. Those who are two years above, 4 succeed and 0 fails, while those who are one year *below* (*i. e.*, dull), 14 succeed and 3 fail. This is very close to the ratio of 35 to 8.

On the whole the results agree very closely. So whether a child is precocious or backward, he has about the same chance of succeeding with the questions that are *suited to his mental age.* This seems to be a striking confirmation of the accuracy and fairness of the test.

A question of considerable interest is to what extent have our ordinary methods of classification in the schools more or less consciously and accurately recognized the actual mental standing of the child. In other words, to what extent is it true that we somehow by our ordinary methods size up children about right and do not need any such thing as the Binet Scale in order to set us right.

In order to get at this we first found out how many children of those concerned in our study were above or behind school *grade* to the extent of one, two or more years, assuming that a six-year-old child should be in the first grade, seven years in second grade, etc. Table III gives this result. It also gives the number of children who were one, two and three years above or below school grade *according to the Binet Scale.*

TABLE III

Above grade according to school standard	150 = 11.6%
No. in grades ahead of what their mental ability as measured by the Binet scale, would warrant	121 = 9.4%
In right grade according to school standard	393 = 30 %
In right grade according to Binet scale	558 = 43.2%
Below grade according to school standard	659 = 51.1%
No. in grades below what their mental ability warrants	558 = 43.2%

By Years of Retardation

	1 yr.	2 yrs.	3 yrs.	4 yrs.
Retarded according to school system	361	186	90	22
No. children backward according to Binet scale	312	156	79	37
No. children in a school grade below that which their mental age would warrant	449	90	8	

It will be seen from a study of this Table that a somewhat smaller number are behind or above, according to the Binet Scale, than are behind or ahead of school grade. Now, provided these are the same children, we have a justification for the school procedure. For example, we see that 186 children are two years behind grade, that is to say, they are two grades below where their age would presumably put them, and we find also that 156 children are two years behind according to the Binet Scale. In other words, provided they are the same children, the school system is justified in keeping at least 156 of the 186 two years behind their grade. It only remains to account for that 30 which are behind grade but not backward according to the Binet Scale. They might easily be accounted for on the assumption of not having entered school at six years of age. But we shall see.

Analyzing our data so as to show exactly where each individual is, we find that the case is not as favorable as we suggested in the previous paragraph, that many children who are normal mentally are two or three or possibly four years behind their *grade*. We find a great many other children who are mentally dull, not as far behind their grade as their mentality would require. We find still worse conditions among those who are *ahead* of their age mentally. They are *not* correspondingly far ahead in their grade.

In other words, the two systems do not agree at all. Now, having satisfied ourselves that the Binet Scale is the most accurate method that we have of determining intellectual ability in children, the question at once arises, how much injustice is being done these children by the ordinary school routine? We are not now concerned with criticising this particular school system, consequently we do not care what may be the answer to this question in this particular case. We are merely concerned to point out that the conditions found here are probably typical, and that by the use of this method, any superintendent may examine his system of schools, and determine with considerable accuracy whether each and every child is in the grade that his mental ability actually warrants. Of course, it is evident that a child may have the mental ability of eight years, but if he has never been to school he must be in the first grade for a time at least. But on the other hand, he should not be in the third grade two years later when he is ten years old mentally. As the years go by, he should get through with the mechanics of the learning process in the elements, and be up to what his mentality warrants.

TABLE IV. Section *A*—at age

Age		Grades						Totals				
Physical	Mental	1st yr.	2d yr.	3rd yr.	4th yr.	5th yr.	6th yr.	No. tested	No. in normal grade	No. retarded	No. advanc'd	Below school age
4	IV	1						1	1			1
5	V	24	1					25	24		1	25
6	VI	31	2					33	31		2	
7	VII	31	57	6				94	57	31	6	
8	VIII	13	30	33	8	1		85	33	43	9	
9	IX		4	14	26	3		47	26	18	3	
10	X		2	4	37	41	14	98	41	43	14	
11	XI				2	28	18	48	18	30		
12	XII				2	14	20	36		36		
13	XIII						4	4				
	Totals	100	96	57	75	87	56	471	231	205	35	26

TABLE IV. Section *B*—1 yr. backward

Age		Grades						Totals				
Physical	Mental	1st yr.	2d yr.	3rd yr.	4th yr.	5th yr.	6th yr.	No. tested	No. in normal grade	No. retarded	No. advanc'd	Below school age
4	III	1						1				1
5	IV	4						4				4
6	V	19						19				19
7	VI	14	2					16	14		2	
8	VII	21	39	6				66	39	21	6	
9	VIII		12	26	3			41	26	12	3	
10	IX			5	13	6		24	13	5	6	
11	X		1	3	8	21	6	39	21	12	6	
12	XI			1	1	10	24	36	24	12		
13	XII					5	13	18		18		
14	XIII						1	1		1		
	Totals	59	54	41	25	42	44	265	137	81	23	24

TABLE IV. Section *C*—2 yrs. backward

Age		Grades						Totals				
Physical	Mental	1st yr.	2d yr.	3rd yr.	4th yr.	5th yr.	6th yr.	No. tested	No. in normal grade	No. retarded	No. advanc'd	Below school age
6	IV	2						2				2
7	V	8						8				8
8	VI	4	1					5	4		1	
9	VII	6	8	10	1			25	8	6	11	
10	VIII	1	5	13	9			28	13	6	9	
11	IX		1	4	6	5	1	17	6	5	6	
12	X				15	13	5	33	13	15	5	
13	XI					5	11	16	11	5		
14	XII					1	3	4		4		
Totals		21	15	27	31	24	20	138	55	41	32	10

TABLE IV. Section *D*—3 yrs. backward

Age		Grades						Totals				
Physical	Mental	1st yr.	2d yr.	3rd yr.	4th yr.	5th yr.	6th yr.	No. tested	No. in normal grade	No. retarded	No. advanc'd	Below school age
7	IV	1						1				1
8	V	2						2				2
9	VI	0						0				
10	VII	1	7	4				12	7	1	4	
11	VIII		1	7	4	1	1	14	7	1	6	
12	IX			7	7			14	7	7	11	
13	X				7	11	11	29	11	7		
14	XI						6	6	6			
15	XII						1	1	1			
Totals		4	8	18	18	12	19	79	38	17	21	3

TABLE IV. Section *E*—1 yr. advanced

Age		Grades						Totals				
Physical	Mental	1st yr.	2d yr.	3rd yr.	4th yr.	5th yr.	6th yr.	No. tested	No. in normal grade	No. retarded	No. advanc'd	Below school age
4	V	1						1	1			1
5	VI	36						36	36			
6	VII	47	23	3				73	23	47	3	
7	VIII	3	23	18	2			46	18	26	2	
8	IX			12	12	3		27	12	12	3	
9	X			7	26	20	3	56	20	33	3	
10	XI				7	19	7	33	7	26		
11	XII					7	6	13		13		
Totals		87	46	40	47	49	16	285	117	157	11	1

TABLE IV. Section *F*—2 yrs. advanced

Age		Grades						Totals				
Physical	Mental	1st yr.	2d yr.	3rd yr.	4th yr.	5th yr.	6th yr.	No. tested	No. in normal grade	No. retarded	No. advanc'd	Below school age
4	VI	**2**						2	2			
5	VII	14	**1**					15	1	14		
6	VIII	1	4	**1**				6	1	5		
7	IX			3	**0**			3	0	3		
8	X			1	6	**0**		7	0	7		
9	XI				1	3	**1**	5	1	4		
10	XII					2		2		2		
Totals		17	5	5	7	5	1	40	5	35		

TABLE IV. Section *G*—3 yrs. advanced

Age		Grades						Totals				
Physical	Mental	1st yr.	2d yr.	3rd yr.	4th yr.	5th yr.	6th yr.	No. tested	No. in normal grade	No. retarded	No. advanc'd	Below school age
5	VIII	2	1	**0**				3	0	3		
6	IX				**1**			1	1			
7	X			2	1	**0**		3	0	3		
9	XII				1	1	**0**	2	0	2		
10	XIII					1	2	3		3		
Totals		2	1	2	3	2	2	12	1	11		

TABLE IV. Section *H*

Gradation According to Physical Age

	Grades						Totals				
Phy. Age	1st yr.	2d yr.	3rd yr.	4th yr.	5th yr.	6th yr.	Whole number tested	No. in normal grade	No. retarded	No. advanced	No. in school bel. age
4	5						5				5
5	80	3					83				83
6	100	29	4	1			134	100		34	
7	57	82	29	3			171	82	57	32	
8	40	70	52	26	4		192	52	110	30	
9	6	24	57	58	27	4	176	58	87	31	
10	2	14	26	66	69	23	200	69	108	23	
11		3	14	20	62	32	131	32	99		
12			8	25	37	49	119		119		
13				7	21	39	67		67		
14					1	10	11		11		
15						1	1		1		
Totals	290	225	190	206	221	158	1290	393	659	150	88

TABLE IV. Section *J*

Gradation According to Mental Age

Men. Age	Grades						Totals				
	1st yr.	2d yr.	3rd yr.	4th yr.	5th yr.	6th yr.	Whole number tested	No. in normal grade	No Retarded	No. advanced	No in school bel. age
III	1						1				1
IV	8						8				8
V	54	1					55				55
VI	87	5					92	87		5	
VII	120	135	29	1			285	135	120	30	
VIII	20	76	98	26	2	1	222	98	96	29	
IX		5	45	65	17	1	133	65	50	18	
X		3	17	100	106	39	265	106	120	39	
XI			1	11	65	67	144	67	77		
XII				3	30	43	76		76		
XIII					1	7	8		8		
Totals	290	225	190	206	221	158	1290	558 43.2%	547 42.4%	121 9.4%	64 5%

TABLE IV. Section *K*

Total misplaced by years

	Retarded				Advanced		
According to	1 yr.	2 yr.	3 yr.	4 yr.	1 yr.	2 yr.	3 yr.
Physical Age	361	186	90	22	134	15	1
Mental Age	449	90	8		116	3	1

Table IV gives the foregoing comparisons. Section A. shows the number of children who are the same age *mentally* as *physically* and gives the number for each age in each grade. For example of the children who are eight years old both *mentally and physically*, there are 13 in the first year, 30 in the second year and 33 in the third year, 8 in the fourth year, one in the fifth year. These children, having the mentality of eight years would naturally all be in the third year of school. Consequently the 13 are two years behind what they should be and 30 are one year behind, 33 are in their right place, while 8 are a year ahead of what their mental endowments would probably permit and one is two years ahead.

In the same way we see the condition for each age from four to thirteen. At the right are given the totals. The total number of each age tested, the number that are in their proper grade according to their mental endowments as determined by the Binet tests, the number who are retarded and the number advanced. The footings show the total number of children in each grade.

Section B. of this table shows the children who are mentally *one year behind* their physical age, the children who are really eight years but test seven, nine and test eight, etc. Reading this as the former section, we can see that of the eight year children, 21 are in the first year of school, 39 are in the second year and 6 are in the third year. Being seven years old mentally, they should of course be in the second school year and 39 of them are found here, but 21 of them are only in the first year, while 6 of them are in the third year, a year ahead of what their mentality warrants. Similarly for the other years..

Section C. shows the same thing again for those children who are *two* years behind their physical age. They are, for instance, eight years old but test only six.

Section D. shows those who are *three* years behind their age. For example, the children who are ten years old, test only seven.

How imperfectly we do justice to these backward children is well seen in the totals on this chart. Of 79 children of this class, 38, almost exactly half, are in their proper place according to their mental ability while the remainder are divided into fairly equal groups, 17 being below what they ought to be and 21 being ahead.

Sections E., F. and G. show the distribution in a similar manner of those who are ahead of their physical age.

The most noticeable thing in these sections is the small number of children who are advanced and the still smaller number who are even up to what their mental ability would warrant. For example, referring to the totals of those who are one year ahead of the average child (Section E.), 117 are properly placed while 157 are held back with the normal child. Of those who are two years ahead of their age (Section F.), 5 are properly placed while 35 are held back, and of those who are three years ahead (Section G.), one is in his proper place and eleven are held back. None in these two latter groups are advanced. Nothing could be clearer than the way in which these figures demonstrate what we all know from experience must be true, that is, that we drag the dull child up, trying to keep him up to his grade and hold the bright child back to keep him to the same grade, thus doing gross injustice to both.

Sections H. and J. of this table give the summaries for the others, Section H. giving all of those of each physical age in each year of school, Section J. giving the same for the mental age.

A few illustrations will make the reading of the chart clear and easy. Referring to Chart J, one sees that under the mental age of eight, there are 20 children in the first school year. It might be thought that these had just entered school and consequently are properly placed. Reference to the other sections will show exactly where they are. For example, we find 13 of them in Section A. (see Sec. A., Mental Age 8, Column "First year"), which shows that these children are eight physically and mentally. One is found on Chart C. He is *ten years old physically, eight years old mentally and still in the first year.* These 14 children are certainly old enough to be in a higher grade. The other 6 are found on Charts E., F. and G. three on Chart E. who are physically seven years old, one on Chart F. is six years old, and 2 on Chart G. are only five years old.

Again in Section J. at ten years of age mentally, we find that there are seventeen children in the third year of school. Let us see how these children are distributed on the other tables. On Table A., we find 4 of them who are ten years old physically as well as mentally. These children should of course be in the fifth year of school and there seems to be no reason why they should not be there. On Chart B. we find three more who are eleven years old physically. These 3 are really one year backward but are held back *two* years, possibly through some technicality or because they are especially weak in some one branch. On Section E., we find 7 more of our children. They are nine years old physically—in other words, they are one year in advance of their age. There is another on Chart F. who is only eight years of age and 2 on Chart G. are only seven. It is probable that these children are kept back to fit into the grade that corresponds most nearly to their age, even though their mental ability would warrant their being two years ahead.

Once again, on Section J. we find at the age of nine, there are 17 children in the fifth school year. On section A. we find at the mental age of nine, there are 3 in the fifth school year. These children are also nine years old physically. They have been put ahead a year, perhaps because of good memory or because of some precocious ways, although they have not anything above the normal mentality and should be in the fourth year of school. In Section B. we find 6 of these children of the mental age of nine in the fifth year—they are ten years old physically, thus showing that they are really one year backward and that they have been pushed ahead, undoubtedly in an effort to keep them up to the grade which their physical age requires. In Section C. we find 5 more of this group of the mental age of nine in the fifth year. They are eleven years old physically. They again, have been pushed forward a year, although it has not been possible to push them forward two years as their physical age would demand. In Section E. we find 3 more. These children are only eight years old physically, although mentally nine. Here you have the precocious child. He is a year ahead of the average child and consequently is pushed along by his ambitious parents or his ambitious teacher, and although he has not the mentality to be in the fifth year, yet he is found there. This is the child that later breaks down and gives rise to the belief that the precocious child is destined to failure later on. He *is*, if his precocity is made the basis for his being crowded way beyond what his actual mental endowments will warrant.

Let us now analyze the situation from the standpoint of the physical age. Referring to Section H. we find that at age ten, there are 14 children in the second school year. On Section A. we find two of these. These are the children who are ten years mentally as well as physically. They have the right to be in the fifth school year and yet they are held back to the second. On Chart C. we find five more, and their mental age is shown to be eight. They have the ability to be in the third school year but are held back in the second. They are dull and slow as is shown by the fact that while they are ten years old they test only eight and consequently they are not only held back to what their mental age would warrant but a year beyond that. The remaining 7 are found on Section D. They are seven years old mentally and consequently are in their right place. One half of the total number are thus found to be where they ought to be—the rest are unjustly treated.

This is the type of child that makes the truant and incorrigible. He knows that he is duller than some but he knows that he is not as dull as his position would indicate. He takes no interest in the work because it is below him and consequently he plays truant or gets into mischief.

As a final illustration, on Chart H. at age nine, we find that there are 4 children in the sixth school year, two years ahead of what their physical age would warrant, but we find upon reference to Chart E. that three of them are ten years old mentally. In other words, they are one year precocious but they are placed two years ahead. They are thus a year ahead of what even their mental ability would warrant. This is perhaps a case of a bright attractive child who is pushed along because he is above the average. And because he is above the average, he is pushed along at *twice the rate* at which he ought to go. Another case where later the child must break down and become useless.

Referring to Chart F. we find the fourth one who is two years ahead of his physical age and is consequently placed where he should be according to his mental ability.

In other words, out of four children, one is correctly placed.

We are conscious that many a reader will feel that we are leaning too hard upon the supposed accuracy of the Binet tests. We have been all through this. We have had the same misgivings about these tests, but the more we use them the more we feel that they will bear all that is put upon them. Besides the demonstration given in the first part of this paper from the distribution curve, we see the same thing in every line of these tables. Refer again to Section J. of this table and note the distribution of the children of the various mental ages through the different grades. Take age eight as an example. This shows perhaps the first complete range and it will be seen that whereas the eight-year-old children should be in the third year of school life, we have 98 at that age with 76 a year below and 20 two years below, while above we have 26, 2 and 1,—a very good distribution curve. Again, at age nine, it runs 5, 45, 65 (the high point) 17, 1. Even at age ten, 3, 17, 100, 106 and 39. Beyond that we lose the curve because we run into the higher school grades where our tests are supplemented by others and are not so definitely comparable.

Besides this, *it is precisely what we all know does happen in the school.* We know that children are held back because they are too bright; we know that they are pushed forward because they are too large for their grade; we know that they are retarded because of some technicality—they are not up in their arithmetic, or they cannot read quite well enough, while in other things they are abundantly able to go ahead. Besides that, we know that this is true from the experience of these children in after life.

It is almost beyond the bounds of possibility that we could get such figures as are shown in this table unless the tests upon which it is based were amazingly accurate, and if they are accurate, it gives us a wonderfully valuable method of measuring our efficiency and our accuracy in the grading of children, and points out the possibilities of great improvement along this line,—much to the advantage of the children and the comfort of the teacher.

The data used in the foregoing tables have also been tabulated to show the relation of the sexes and the difference between the schools that are in the city and those that are outside in the township. These figures are not especially striking but make a good illustration of the possibilities of such data.

It will be seen from looking at the figures for the boys and girls which, by the way, follow the same normal distribution

TABLE V.

	4 to 7 yrs. below	3 yrs. below	2 yrs. below	1 yr. below	At Age	1 yr. Above	2 yrs. Above	3 yrs. Above	4 yrs. Above	Total
City Boys	19	23	59	112	188	119	12	4	0	536
Country Boys	12	13	28	80	102	49	12	3	0	299
City Girls	13	23	37	65	172	106	20	4	1	441
Country Girls	9	20	31	56	89	57	5	3	1	271
Totals	53	79	155	313	551	331	49	14	2	1547
Total Boys and Girls										
Boys	31	36	87	192	290	168	24	7	0	835
Girls	22	43	68	121	261	163	25	7	2	712
Total City and Country										
City	32	46	96	177	360	225	24	8	1	977
Country	21	33	59	136	191	106	17	6	1	670

curve as is seen in the combination of the two, that there are more backward boys than girls. This is a very neat confirmation of the tests since it agrees with statistics everywhere that there are more defective boys than girls. There are more in institutions for the feeble-minded and although this is usually accounted for by the explanation that girls are more easily taken care of at home, therefore do not get into institutions, yet in view of the facts, there is no doubt that there are more feeble-minded boys than girls. There are more boys in the Special Classes in London and in the Hilfsschulen in Germany and in the Special Classes so far formed in the United States, and everything agrees with this thesis.

Comparing city with country children, there are apparently more children above grade in the city than in the country. This probably has little significance in this case and may only mean that the more ambitious youths of the country go into the city to school and so were tested there.

It will be remembered that the foregoing discussion pertains to the children in the first six grades of the public school system. The seventh, eighth, and ninth grades being practically able to pass the twelve year Binet tests and the thirteen year tests being found too difficult, none of the Binet tests were given to these grades. And inasmuch as the tests that were given were not the Binet tests it does not properly come into this paper. So we pass over them. They will be considered later and reported if anything valuable is discovered.

Turning to the High School, the thirteen year tests together with three others were given to all of these students. We shall consider only those that belong to the Binet scale. Early in our use of the tests, we felt that the thirteen year tests were altogether too difficult and we have accordingly based nothing upon their value. These experiments in the High School confirm that view.

The complete results are given in Table VI.

TABLE VI

Showing how High School pupils succeed with Binet XIII year tests

PART I. BY YEARS IN HIGH SCHOOL

Year of High School	Question 1. "Cutting out"		Question 2. "Triangle"		Question 3. "Differences"	
	Boys	Girls	Boys	Girls	Boys	Girls
1st	9–27	8–17	17–20	4–21	9–28	7–18
2nd	4–9	10–16	9–4	10–16	8–5	9–17
3rd	4–6	5–12	6–4	5–12	2–8	7–10
4th	4–2	3–4	5–1	5–2	6–0	4–3

TABLE VI

PART 2. BY AGES

Phy. Age.	Year of High Sch.	Cutting out		Triangle		Differences	
		Boys	Girls	Boys	Girls	Boys	Girls
13	1st yr.	0–3	0–3	2–1	1–2	1–2	1–2
14	1st yr.	3–4	3–2	2–5	0–5	2–5	2–3
	2nd "	0–1	2–2	0–1	2–2	1–0	2–2
	Totals	3–5	5–4	2–6	2–7	3–5	4–5
15	1st yr.	2–9	2–6	4–8	0–8	2–10	2–6
	2nd "	1–1	2–2	1–1	1–3	2–0	0–4
	3rd "		0–2		1–1		0–2
	Totals	3–10	4–10	5–9	2–12	4–10	2–12

TABLE VI—*Continued*

16	1st yr.	2–5	2–3	4–5	0–5	2–5	1–4
	2nd "	3–3	3–4	5–1	4–3	1–5	4–3
	3rd "	2–2	0–1	2–2	1–0	0–4	1–0
	4th "	1–0	1–0	1–0	1–0	1–0	0–1
	Totals	8–10	6–8	12–8	6–8	4–14	6–8
17	1st yr.	2–5	1–2	4–3	2–1	2–5	1–2
	2nd "	0–2	0–4	2–0	0–4	2–0	0–4
	3rd "	2–3	3–4	4–1	1–6	2–3	3–4
	4th "	2–1	2–3	3–0	3–2	3–0	3–2
	Totals	6–11	6–13	13–4	6–13	9–8	7–12
18	1st yr.	0–1		1–0		0–1	
	2nd "	0–2	2–3	1–1	2–3	2–0	1–4
	3rd "	0–1	2–5	0–1	2–5	0–1	3–4
	4th "	1–0	0–1	1–0	1–0	1–0	1–0
	Totals	8–4	4–9	3–2	5–8	3–2	5–8
19	1st yr.		0–1		1–0		0–1
	2nd "		0–1		0–1		1–0
	4th "	0–1		0–1		1–0	
	Totals	0–1	0–2	0–1	1–1	1–0	1–1
21	2nd yr.		1–0		1–0		1–0

Examining the Table we see that on question 1 the boys in the first year succeed and fail to the number of 9 and 27 respectively. In the second year 10 succeed while 16 fail, in the third year 4 succeed and 6 fail, in the last year 4 succeed and 2 fail.

The girls' record is as follows. For the first year 8 to 17; second year 10 to 15; third year, 5 to 12; and last year 3 succeed and 4 fail.

Throughout the high school, then, we have for the boys twenty-one successes and forty-four failures; for the girls twenty-six successes and forty-nine failures.

Taken by ages instead of by high school grades the result is no better. This is seen in the second part of the table.

Not only is this question too difficult for high school pupils but even normal highly trained individuals including college professors fail on it to a large extent. One group of about 25 was given the test by the writer and only 6 succeeded. This group was made up of teachers, superintendents of schools, psychologists, mathematicians and biologists. Another group composed entirely of psychologists was tested by the writer and about twelve succeeded while six failed, giving an average of 66%.

It seems probable that we have here a test, not of what we may call a fundamental and universal human power, but rather a specialized faculty, which may be possessed by some people but not by others although one would not dare say one was of higher intelligence than the other. This perhaps gives us a hint as to what will be necessary in devising tests for higher grades of intelligence. We cannot perhaps hope to find any tests of universal application but rather it will be necessary to test a special gift along different lines.

The second test of the "reversed triangle" fares somewhat better, but not until the senior year does it begin to have the proportion of successes that we have established as necessary in a test. One would expect that the study of geometry had something to do with this result.

As to the third of the Binet tests, it again fares better than the others and shows marked improvement in the results in the senior year. Indeed, like the second one, not until then does it begin to get any reasonable proportion of successes, as will be seen.

There are very few who get all of them correct but if we allow a margin of two and consider the test passed if three differences out of the five are given correctly, then we have in the last year of high school, the boys all succeeding and the girls in the ratio of four to three.

Taking the tests altogether we find that only one boy in the first year of high school gets them all. There are no successful girls. In the second year there are no boys who succeed and but three girls. In the third year we have one boy and no girl. In the fourth year we have four boys and two girls. The last year in the high school ought to mean, according to the usual way of counting, a child eighteen or nineteen years old. It would seem, then, as though we could say that any person who passed these three tests had at least the mentality of an eighteen year old person. But the tests are so special in their application that it would not be safe to say that one who did not pass them did not have the mentality of at least eighteen. This being the case they hardly seem of great value as tests.

Prof. Binet has published in the April, 1911, number of the Bulletin De La société Libre Pour L'Étude Psychologique de L'Enfant, his latest comment on his measuring scale. He gives a modified list of questions.

In this list he has done three things. First, he has reduced the number of questions to five in every year except age IV, (there he finds only four questions). This obviates one slight difficulty which has been met with in scaling the results. Because some years had five questions and some years seven or eight, there was a little difficulty in counting up. However, here at Vineland we have never found that of great importance. It is a decided advantage, however, to have all the years with the same number of questions.

The next thing that he has done has been to omit some of the questions which are strictly dependent upon training and educational opportunity, such as the reading and writing tests. This is good.

Thirdly, he has transposed certain tests from one year to another with the idea of improving the general scale.

With these changes, however, we cannot in every case agree. The results of our experience as given in the preceding tables do not warrant us in making all of the changes that Binet proposes. We give herewith the complete list as we would place it as the result of our experience and following as closely as possible Prof. Binet's desire in the matter.

BINET SCALE

New	Old		Number of successes and failures
		III.	
No change	No change	1. Nose, eyes, mouth.	
		2. It rains. I am hungry.	
		3. Repeat 7 2.	
		4. Picture (enumerates.)	
		5. Name.	
		IV.	
		1. Boy or girl.	
		2. Key, knife, penny.	
		3. Repeat 7, 4, 8.	
		4. Lines.	
		V.	
1.	1.	1. Compares 3 and 12 grams, 6 and 15.	32- 2
2.	2.	2. Copies square.	23-11
3.	new	3. Repeats sentence of 10 syllables.	new
4.	4.	4. Counts four pennies.	30- 4
5.	3.	5. "Patience."	20-12
		VI.	
1.	7.	1. Morning or afternoon.	30-12
2.	4.	2. Defines fork, table, chair, horse, mama.	35- 6
VII 3.	5.	3. Puts key on chair, brings box, shuts door.	25- 7
VII 1. (30-4)	1.	4. Shows right hand, left ear.	35- 8
5.	3.	5. Chooses prettier.	31- 9

Binet's Scale—*Continued*

		VII.	
VI 4. (24-9)	7.	1. Counts 13 pennies.	94- 5
2.	6.	2. Describes pictures.	83-25
VIII 3. (34-3)	1.	3. Sees picture lacks eyes.	87- 9
VI 3. (17-22)	4.	4. Can copy diamond.	95- 8
5.	from VIII	5. Names colors, red, blue, green, yellow.	97- 5
		VIII.	
1.	6.	1. Compares two objects from memory, butterfly, fly; wood, glass; paper, cloth.	87- 2
2.	4.	2. Counts backwards 20 to 1.	90- 1
omitted	from IX	3. Repeats days and week.	85- 4
VII 4. (46-49)	2.	4. Counts stamps 111222.	79-14
5.	from VII	5. Repeats 5 figures.	36- 7
		IX.	
1.	3.	1. Makes change 20c—4c.	33-23
2.	4.	2. Definitions better than use.	45-27
VIII 4. (49-33)	1.	3. Knows date.	48- 7
4.	from X	4. Repeats months in order.	48- 6
X 1 (3-1)	6.	5. Arranges 5 weights.	44-11
		X.	
IX 3. (31-14)	2.	1. Knows money, 1c, 5c, 10c, 25c, 50c, $1, $2, $5, $10.	104- 5
2.	new	2. Copies design	new
—	new	3. Repeats six figures.	new
4.	4.	4. Comprehends easy questions.	98- 8
5.	3.	5. Uses 3 words in two sentences.	92-17
		XI.	
X 3.	1.	1. Sees absurdity: painter, brothers, locked in room, R. R. accident, suicide.	48- 4
XII 2.	2.	2. Uses 3 words in a single sentence.	39-14
XII 3.	3.	3. Gives 60 words in three minutes.	35-3
XV 3.	XII 2.	4. Gives three rhymes.	45-5
XII 5.	5.	5. Puts dissected sentences together.	35- 9
		XII.	
XV 1.	1.	1. Repeats 7 figures.	37- 7
XII 4.	XI 4.	2. Defines charity, justice, goodness.	5- 0
XV 3.	3 (revised)	3. Repeats sentence of 26 syllables.	15-21
1.	new	4. Resists suggestion.	new
XV 5.	4.	5. Problems: (a) Hanging from limb. (b) Neighbors visitors.	40-3
		XV.	
1.		1. Interprets picture.	
		2. Changes hands of clock.	
		3. Code.	
		4. Opposites.	

BINET'S SCALE—*Continued*

		ADULT
1.	XIII 1.	1. Cutting paper.
2.	XIII 2.	2. Reversed triangle.
3.	XIII 3.	3. Gives differences of abstract words.
4.	new	4. Difference between president of a republic and a king.
5.	new	5. Gives sense of a selection read to him.

Binet says that with the new scale *every* question under any given age should be answered, for a child to be credited with that age—instead of *all but one*, as in his earlier plan.

Following each question we give the figures repeated from Table II which show the number of successes and failures on each question by the children of the age at which the question is now placed. In the column before the question is given the number of the question as it was in Binet's older scale, while the first column gives the position that this question has in Binet's new proposed scheme.

Where Binet's new position is different from ours, we give the figures showing the proportion of successes and failures on that question at the age which Binet proposes to place it. This shows in every case that according to our results it is utterly impossible to consider the test in the year in which Binet places it.

In the first four years there are no changes. In age V question 3, "repeating sentence of ten syllables," is entirely new and we take it on Binet's authority. In Age VI there are two which Prof. Binet would place in age VII, but our figures show that they are answered in a goodly proportion at VI.

In question IX, 1. "making change," our use of this was more difficult than the original, which came from the fact that Binet used a 20 sous piece from which the child was to subtract four sous. We, not having a coin of the value of 20c, used the 25c and in order that it might not be too easy to subtract four from five, we made the price 9c; 25—9 is rather a difficult problem for a child of nine, as our results show. We propose now to make it 20—4, exactly as Binet has done and give the child two dimes. This may offer a little confusion but we think on the whole that it will be preferable to the other plan and will probably reduce the difficulty so that the question may properly come in at this age. IX 2. "definitions better than by use," we found rather difficult, it is only succeeded in, as will be noticed, by 45 while 27 fail. However, we feel that we have been a little too exact in our requirements of this question. We have generally required that the child indicate in some way some notion of the *genus*. If we take it simply "superior to use," and accept as satisfactory all those answers in which the child tells what the article is made of or something about its shape it would make the successes greater, which will probably make it satisfactory.

In X 2 the copying design is new, at least to this system. It is the test that Binet suggested in his 1905 list. We have also put in here the repetition of six figures. Decroly and Degand expressed a desire that the memory for figures should be put in, and our experience shows that a child of ten can generally remember six figures, so it would seem to be a good question to put in here.

The comprehension of questions Binet has proposed to divide up, placing the first three ("easy") in age nine but we had no room for it there and so have kept it as it was before.

Age XI, Binet has thrown out entirely. He has no questions for age XI, but makes all those questions go over to XII with the exception of the first one, which he takes back into X. Now, our experience, as will be shown by the figures does not warrant any such thing, we have accordingly kept them in age XI, with the one exception that we have transferred the question of definition of abstract nouns to age XII and brought back to age XI the giving of rhymes, as our experience is that it is perfectly easy for this age.

In age XII we have the questions that were there before plus the new one that Binet suggests, "resisting suggestion." We proposed four questions for age XV, inasmuch as Binet has proposed questions for this year. We are not very certain that they are satisfactory, but they seem worth trying.

The questions for what Binet calls "ADULTS" (which he explains means only "more than fifteen") we have accepted, and followed him in his new suggestions and put in the old questions for XIII, and added two more, "the difference between a president of a republic and a king" and "to give the sense of a selection that is read to the child."

The tests up to and including twelve years are certainly eminently satisfactory. Our proposed list for XV and Binet's "ADULT" must be further tested out to see if they are of any value.

It would seem that with such a start as Binet has given us, some one ought to be able to work out tests for the higher ages. We need above all things, a test for boys and girls beyond twelve years. As Dr. Huey has expressed in the article in the Journal of Psycho-Asthenics, this is the time at which many young people break down and if not arrested in development earlier, become arrested then, and fail to develop those qualities that enable them to become useful and good men and women. Some system of tests which would bring out these defects would be of inestimable value in the treatment of these people socially, in recognition of how much responsibility they had and were able to bear and what they could be expected to do.

It certainly is time for psychology to attack this problem and we believe that an answer is possible.

LITERATURE

L'Adolescence: Etudes de Psychologie et de Pédagogie, par GABRIEL COMPAYRE. Alcan, Paris, 1909. 195 p.

La Vie mentale de l'Adolescent et ses Anomolies. par AUG. LEMAITRE, Foyer solidariste. Saint Blaise, 1910. 238 p.

L'Ame de l'Adolescent, par P. MENDOUSSE. Alcan, Paris, 909. 1315 p.

During the last two years, in striking contrast to the decades or, one might say, centuries, preceding the publication of Dr. Hall's two volumes on "Adolescence" five books on this topic have appeared, all by authors whose standing and reputation entitle them to consideration. One of these, it is true, falls within the date 1911 but appears so early in the year that it may properly be classed with the others. The first of these, Compayre's "L'Adolescence," is so largely based on Dr. Hall's work that it may almost be considered in the light of an extended review of it, into which the author has introduced his own points of agreement and difference. It has the advantage of making accessible to French readers in simplified and attractive form many of the points contained in the large book which would otherwise be inaccessible.

Prof. Lemaitre's "La vie mentale de l'adolescent'' is a collection of separate studies of psychological peculiarities that are presented by the mental life of the adolescent, synopsias, internal speech, paramnesias, mental dissociations, complex hallucinations, multiple personality, parapsychism, bad habits and suicide. Among the synopsias discussed are the tendency to personify letters and figures of which some interesting cases are also to be found in Dr. Hall's "Educational Problems," Vol. II, pp. 336 *et seq.;* colored hearing; and number forms. Some rare synopsias occurring in individuals are also discussed. The chapter on internal speech, an interesting contribution to the subject, is a study published the major part of which was in the Archives der Psychologie in 1904. The studies in paramnesia, mental dissociation, hallucinations and multiple personality, all present interesting material, and the chapter on bad mental habits is of special interest from a pedagogical point of view. The chapter on the suicide of adolescents is an analysis of the predisposing mental states. As a whole, these studies present rather than solve the problems discussed, but the book is full of suggestion for both the psychologist and the teacher.

"L'Ame de l'adolescent," by Professor Mendousse, though written from a psychological point of view, shows everywhere the interest of the teacher of boys. The author discusses the precursory signs of adolescence, devotes a chapter to mental changes of puberty and the customs and rites associated with this age by peoples of various times and countries and treats at some length the subject of adolescent love and dreaming and the characteristics of adolescent reasoning. He also discusses courage and in what sense it is an acquisition of adolescence, emphasizing the sentiments involved, *e. g.*, vanity, regard for opinion, emulation, pride and honor and the conflict with timidity. The characteristic attitude of the professor in a French *lycée* appears in his view of the necessity of discipline, restraint and *surveillance* for the development of character, to the incoherence and instability of which a special chapter is devoted. There are also chapters on organic growth and changes and their psycho-physical effects, mental instability, fatigue and refreshment.

All three of these books are devoted chiefly to the adolescent boy, a chapter in Compayre's book being dedicated to the adolescent girl, who, however, presents a totally different problem from the boy and who greatly needs to be studied. THEODATE L. SMITH.

Der Begriff der staatsbürgerlichen Erziehung, von GEORG KERSCHENSTEINER. B. G. Teubner, Leipzig, 1910. pp. viii, 62.

Kerschensteiner has done notable work in the schools of Munich for many years, in the way of developing in the pupils a spirit of co-operative study. In this little book he presents his idea of what constitutes the essence of civic nurture (*staatsbürgerlichen Erziehung*). Of course the idea of using the public schools for the development of citizens is not a new one. The term has as many meanings as it has had representative advocates, and part of the author's task is to free his meaning from possible misinterpretations. The realization of Kerschensteiner's ideal calls for a reshaping of the method of instruction. Only as children are given work that calls out their best efforts to attain a common end, are they in a way to be properly trained for the best sort of community life. At present the stress in school is on the intellect, the aim is to make the pupils unlike. True, "morals" has a place on the programme; but it has a subject of study. Now, morals is a matter of life, and the schools cannot prepare for life unless in their organization they embody the typical conditions of social life. The basai relations which influence social life in the state, and which may profitably be incorporated in the work of the school, are: (a) a common work, with the features of division of labor; (b) the articulation of each and his work into some great economic plan; (c) the general self-direction with its efforts to the balancing of interest, and with its voluntary subordination of all to the recognized authority of the co-operating group. These basic conditions can be established in the school. In the higher schools the subject of history is eminently fitted for civic nurture,—if carried on with free discussion in class of data gathered from varied sources by the pupils. For less capable children, and for all whose limited experience or immaturity of mind unfit them for the consideration of generalized ideas, instruction must take the form of training; for them the schools must be made *Arbeitsgemeinschaften im kleinen*. School gardens, laboratories and workshops offer good places for co-operative work, *e. g.*, a class of 48 pupils could be divided into 12 groups of 4 each. To one of these groups could be assigned the determination of the specific gravity of lead. One child weighs, another reads and records the weight; a third checks the work of the first; the fourth checks the second. These parts could be shifted (should be in case of lack of agreement) until the work of every child is supported by the group. The task is not finished until the group is a unit. It behooves the brighter children to help teach their less capable mates. Thus is foreshadowed a state not of feverish competition nor of dull uniformity, but one wherein the gifted may find their highest satisfaction in devoting their abilities to the service of the common weal.

FRANK DREW.

Cost accounting pathfinder, by FRANK E. GOODWIN. St. Louis, Mo., Midland Publishing Co., 1910. 267 p.

The author shows that most merchants who fail do so from lack of system. All expense and income should be divided minutely and every item of receipt and expense set forth and analyzed; this is only the sound business logic needful for success. It is said that not one retailer in 100 keeps a true account of selling expenses. In March, 1907, the author collected returns from about 30,000 dealers in different lines and found that less than one per cent. could give an accurate analysis of their selling cost. There is mostly guess work. Dealers especially stumble when they reach percentages. In answer to the question how many dollars must I handle before

I have made a dollar for myself, the average merchant must handle $21. Now, the hod-carrier earning $4.50 a day has no worries and need make no account, but the average retailer in this country has invested $14,400 with a gross business of $31,000 and an average profit of 4.4 per cent., equalling 9 per cent. of investment. Out of this, the retailer must live, lay up a reserve. More than 25 out of 100 retailers go out of business or change every year. More than 90 per cent. eventually give up retailing and only one in 20 gets competency in it. In 1909, there were 11,845 failures in business in this country. Of these, 4,089 lacked capital; 2,861 were incompetent by their own confessions. Men detest accounting. The average active life of the retailer is about 20 years, not more. Their cry often is plenty of sale, but no profit. Every dealer should charge a salary to himself. The proprietor's salary is a legitimate expenditure. Then must follow rent of building, whether owned or not, interest on investment, whether owned or borrowed and all fixed expenses like taxes, insurance, water, lights, fuel, subscriptions, donations, telegrams, phone messages, advertising, goods stolen and other losses.

Business men are dishonest in dealing with themselves. Goods in stock for years are entered at first cost. Of 215 retail stores placed in receivers' hands, the stock of nearly all was found valued at least 50 per cent. too high. This is like watered stock. Stock taking can be superseded by a perpetual inventory showing depreciation of all stock and furniture so that one can see precisely how everything stands to date. Profit is the will-o'-the-wisp to be always chased and found wherever possible.

The principles of industrial management, by JOHN C. DUNCAN. N. Y., Appleton & Co., 1911. 323 p.

The material of this book was gathered from many sources and is one of the best of quite a number that bear upon the general problem of efficiency. The present work is divided into three parts, economic environment including a glance at industrial education, plant location, the ideal situation and business specialization. Part II, equipment of the plant including the synthetic analytic assembling of industries and productions and its effect on layout and structure, the building and the workers and the power problem. Part III is on organization and management, treating three types: the labor force, payment of workmen, their records, the record of raw material of finished and unfinished goods, record of equipment.

Household administration: its place in the higher education of women. Edited by Alice Ravenhill and Catherine J. Schiff. London, Grant Richards, Ltd., 1910. 324 p.

This book endeavors to define the importance and scope of household administration to-day and to approve the necessity of adequate preparation, and to show that the domestic arts are no collection of empirical conventions to be acquired by imitation and exercised by instinct. The topics discussed are a brief sketch of woman's position in the family, the place of biology in her equipment, science in the household, economic relations of it, the relations of sanitary science to family life and individual efficiency, woman and the domestic arts, needlework, dressmaking and housecraft.

Spelling efficiency in relations to age, grade and sex and the question of transfer, by J. E. WALLACE WALLIN. Baltimore, Warwick & York, Inc., 1911. 91 p. (Educational Psychology Monographs.)

The author considers spelling proficiency as measured by school and grade totals, the relations to sex, whether spelling efficiency acquired in column drills can be transferred to dictate compositions and how teachers and principals regard spelling drills in the elementary schools of Cleveland. His conclusion is that syllabification is an aid and so are interschool contests. The spelling methods he thinks very effective. Intensive daily drill in these is necessary, but other methods should be used. Instruction here should be teaching, not unteaching. The words selected for intensive drill should vary with the character of the school population and should be those in common use and not those that the children will never use again. Drill is especially effective with poor spellers. Children differ greatly in ideational and memory type so that spelling should appeal to a variety of mental images, particularly the visual, auditory, motor, etc.

Modern Germany, by J. ELLIS BARKER. London, Smith, Elder & Co., 1909. 660 p.

This edition is greatly enlarged and there are at least five new chapters. By general consent, Mr. Barker's book is the most comprehensive and vivid picture of modern Germany that has yet been presented to English writers. Among the 26 chapters, are discussion of foreign policy; expansion of Germany in different directions; relations between Germany and France; army; navy; the emperor; social democracy; education and miseducation; rural industria; waterways and canals; railways; shipbuilding; chemical industries; fiscal policy, wages, etc. We have no space here to go into details concerning so comprehensive a book. One striking feature of it should be noticed and that is that in the chapter on education, the author has little but condemnation, insisting that the educational work of the country has been vastly overrated, that neither political nor economic success is dependent upon it, that even the technical schools involve great loss of time, that education is too theoretical to be practical, that it is unhygienic, the body is neglected, etc. In the chapter on chemical industries, it is shown that their development in 25 years has been meteoric, that this progress has been gradual and not spasmodic. About 170,000 workmen who are paid more than $50,000,000 a year are employed. Besides the direct advantage derived from these, other industries are indirectly greatly benefited, *e. g.*, beet sugar 20,000,000 of tons per year, worth $100,000,000. This enormous sugar industry Germany owes to the chemists. This science has enormously stimulated agriculture. Many a natural monopoly possessed by countries that control the tropics is now threatened by chemical discoveries, *e. g.*, indigo, artificial musk, vanilla, camphor, saccharine sugar, tar dyes instead of vegetable, etc. Germany imports five times more chemical raw products than she exports. Her dependence on these raw products is rapidly increasing so that her success is not due to gifts of nature, but to patient work and an enlightened government policy, etc. In 1900, there were more than 7,000 German chemists trained at universities and technical high schools. Manufacturers can no longer thrive on secrets.

Work, wages and profits; their influence on the cost of living. By H. L. GANTT. New York, The Engineering Magazine, 1911. 194 p.

This work treats of the application of scientific method to the labor problem, utilization of labor, the compensation of workmen, day and piece work, task work with a bonus, training workmen in habits of industry, co-operation, fixing habits in an industry, profits and their influence on the cost of living.

Efficiency as a basis for operation and wages, by HARRINGTON EMERSON. New York, The Engineering Magazine, 1911. 224 p. (Works Management Library.)

This excellent little book treats of typical inefficiencies and their significance, national efficiencies, their tendencies and influence, the strength and weakness of existing systems of organization, line and staff organization in industrial concerns, their standards, their relations to organization and to results, the realization of standards in practice, the modern theory of cost, accounting, the location, and elimination of waste, the efficiency system in operation, standard times and bonus, what the efficiency system may accomplish, the gospel of efficiency.

Das Leben der Kinder, von PAOLA LOMBROSO. Autorisierte Übersetzung von Helene Goldbaum. Leipzig, Otto Nemnich, 1909. 112 p. (Pädagogische Monographien, hrsg. von E. Neumann. VI Band.)

The author of this work, the famous professor of Pathological Anatomy at Turin, has summed up her views on child nature and development in chapters treating the following topics, how the child expresses itself at survival, its mental powers and the law of minimal expenditure of energy, the evolution of thought, why children like myths and *Märchen*, child drawing and the psychology of the proletarian child.

The career of the child, by MAXIMILIAN P. E. GROSZMANN. Boston, Richard G. Badger, 1911. 335 p.

We are glad to have this author's view. He has read widely and had much experience, first with the Ethical Training School of New York and lately, at his own institution. Among the topics he considers here are the dignity and responsibility of the teaching profession, the kindergarten, co-ordination, the physical side, the course of study, the manual principle, mathematical evolution, geography, history, nature, language, reading, writing, hygiene, discipline, defectives, crime and the high school.

The town child, by REGINALD A. BRAY. London, T. Fisher Unwin, 1907. 333 p.

This valuable and comprehensive treatise deals first with theory, with the problems of the town, the environment and the man, man and environment; and second, with practice, the child and the needs of life, the school, the state and religion, the child and religion, the child and the world.

Pubertät und Schule, von HANS GUDDEN. München, Otto Gmelin, 1911. 31 p.

This address really adds nothing whatever to our knowledge of the subject and seems to have been worked up from a very few and exclusively German authorities, with no sign of any knowledge on the author's part that there are others.

When should a child begin school, by W. H. WINCH. Baltimore, Warwick & York, Inc., 1911. 98 p. (Educational Psychology Monographs.)

This is an interesting and important monograph discussing the age of entry and subsequent progress in school, its relations to the social circumstances of children, influence of early entry on behavior and attentiveness, with the summarized results, viz., that at least up to five, early entrance confers no advantage, but there may be slight advantage so far as school work is concerned if entrance is after that age. The author's conclusions are against the advantages of early entry. We confess we cannot follow the author to these conclusions, and even if they be true, he certainly does not sufficiently take account of the whole child.

Principles of education, by FREDERICK ELMER BOLTON. New York, Charles Scribner's Sons, 1910. 790 p.

This work comprises 28 chapters, as follows: the new interpretation of education; adaptation, adjustment, and specialization of functions; development and specialization of the nervous system and the significance for education; the theory of recapitulation; educational significance of recapitulation; the culture epochs theory and education; from fundamental to accessory in education; instinct in relation to education; nature and nurture; inheritance and education; correlations between mind and body; work, fatigue, and hygiene; individual variations and differences; the nature of memory processes; the nature and educational significance of association; the wise use and training of memory; imitation in relation to education; sensory education; nature of imagination; imagination and education; apperception in relation to education; motor expression in relation to education; the nature of thinking; the concept in education; induction and deduction in education; emotional life and education; interest and education; volition and moral education; general discipline and educational values. It is one of the most comprehensive, philosophical and matured works on pedagogy that this country has yet produced. It is distinctly in advance of any German treatise of modern times. The author has read widely and thought much. His material has been well digested with successive classes. He is progressive and up to date. It is, as the title indicates, a work that essentially deals with principles and not with details. We hope to give a more extended review later.

England's need in education, by JOSEPH S. KNOWLSON. London, A. C. Fifield, 1911. 187 p.

The trouble with education, according to this work, is to be found by taking a broad view, and beginning with primary education and not neglecting the will for the intellect; it is necessary to study the child, to have a new time-table, develop new methods, give the teacher more freedom, make the rate payer feel that he is getting more for his money, reconstructing religious training, introduce circle teaching, etc.

Pädagogisch-Psychologische Arbeiten: Veröffentlichungen des Institutes für Experimentelle Pädagogik und Psychologie des Leipziger Lehrervereins. Band 1. Leipzig, Alfred Hahns, 1910. 208 p.

This is the first publication of the Institute for Experimental Pedagogy and Psychology by the Teachers' Association of Leipzig. We are told at the outset that Wundt's psychology has conquered the world. Nevertheless, a very small portion of the students of pedagogy know anything of experimental psychology and this Verein with this organ attempts to remedy the matter. We are given in considerable length the methods of organization, description of its eight rooms, its topics, the number of its professors, etc. In a second article, Max Brahn characterizes experimental pedagogy, traced back German-wise to Kant, and has something to say about the study of the child and individual psychology. The two long articles are a study of the first instruction in language for deaf mutes based on statistical studies and experimental psychological investigations. The second is a study of the scope of the field of attention of adults compared with that of children. The method used is that of recognizing dots and the author finds that the field of attention is "once or twice smaller in children than in adults, that the children make more errors and that the constancy of their attention is more fluctuating." Considerable space is given to describing a pendulum tachistoscope and new apparatus for experimental investigations. On the whole, neither this nor that study of attention which is followed so hard after by an English group of experimental psychologists is quite as promising as we wish it might be. In fact, the number of school topics really investigated up to date in the laboratory has been rather limited and even in these, the results acquired have been of very precious though very small significance.

Educational values, by WILLIAM CHANDLER BAGLEY. New York, The Macmillan Company, 1911. 267 p.

This work is more important and accessible with some analysis of the contents of each chapter and with a good index. The writer treats of inherited and acquired control of conduct, specific habits, ideas, meanings, concepts, facts, principles, ideals and educationalized standards, prejudices, tastes and aptitudes. He then discusses the limitations of educative forces in modifying conduct, passing later to part second, the classification of functions and values. Here he discusses the criterion and rubrics of function and value, values to be realized in fulfilling the training and the instructional, inspirational, disciplinary, recreative and interpretative functions respectively, each of the above six adjectives designating a chapter and finally, he discusses the school environment as a source of educative material. He has sought to organize the methods of teaching upon a rational basis which it now lacks. The time has not yet come for a final statement of educational functions for psychology and the higher thought processes are not yet sufficiently known.

Craftsmanship in teaching, by William Chandler Bagley. New York, The Macmillan Company, 1911. 247 p.

The writer discusses optimism in teaching, how to increase efficiency and test it in supervision, the relations of education, utility, the scientific spirit, the possibility of training children to study, a plea for the definite in education, science as related to the teaching of literature, the new attitude towards drill, the ideal teacher. This is one of those indexless books which has nothing but the above table of contents to guide the reader to what he wants. Such books nowadays are not read. Indeed, very few books are read, but they are looked at for reference by those who are seeking very special topics. Perhaps this is most of all the case of this kind that expatiate over the wide field of general education, books that might have had a good many other different titles.

A study of greatness in men, by J. N. Larned. Boston, Houghton, Mifflin Co., 1911. 303 p.

This book contains five chapters: what goes into the making of a great man, Napoleon who is regarded as a prodigy without greatness, Cromwell who was imperfect in greatness, Washington who was impressive in greatness, and Lincoln who was simplest in greatness. The essays are well written and rhetorical.

Essays on duty and discipline; a series of papers on the training of children in relation to social and national welfare. New York, Cassell & Co., 1910.

This book consists of a number of essays and articles culled from various sources upon the subject. There are in all thirty articles. Some of the most taking of these are the spoiled child, old- and new-fashioned education, sentimental England, wanted a fair start, save the boys, have we the grit of our forefathers to endure hardness, the new way of life, appeal to church women, moral and religious training, things we do not want.

The adult school movement, by Edgar F. Hobley and Thomas W. Mercer. London, Headley Bros., 1910. 80 p.

This book does not pretend to be exhaustive, but rather suggestive, indicating the importance of a movement that has pursued its way more or less sporadically up to date and which now needs more efficient organization. The chapter heads are the rise and growth of the movement, its objects, methods, principles, significance, influence, perils, possibilities.

Principles of education, by W. Franklin Jones. New York, The Macmillan Company, 1911. 293 p.

This is a day of pedagogic unrest. The history of education has never found a time when the struggle to attain sound theory and to realize it was so keen. The author discusses the meaning of education in the usual normal school style, to really read which is almost utterly impossible He then talks about nature study groups, social studies, formal studies, motivation, play impulse, teacher's influence, methods—subjective, objective, deductive, inductive, will-training, etc. The writer of this note spent a good deal of time one Sunday afternoon hunting this book through and through, up and down to see whether there was any indication that the author had informed himself in any up-to-date way and secondly, whether he really had any power of thought or fruitful suggestion. These questions remain unanswered in the writer's mind.

Annals of educational progress in 1910; a report upon current educational activities throughout the world. By JOHN PALMER GARBER. Philadelphia, J. B. Lippincott Co., 1911. 396 p. (Lippincott's Educational Series edited by Martin G. Brumbaugh.)

This general survey of progress during the last year is of course highly sub-divided. Part I treats vocational and agricultural education; part II, developments directly affecting public schools and their various types; part III, of developments affecting the higher institutions; part IV, on pay; part V, social progress and problems; part VI, foreign institutions; part VII, meetings and miscellaneous. The general purpose is to furnish at the close of each year a succinct statement of educational movements and to give as clear a view as possible of the trend and outlook of affairs affecting education throughout the world.

The Tenth Yearbook of the National Society for the Study of Education. Part I, The city school as a community centre. Chicago, University of Chicago Press, 79 p. *Part II, The rural school as a community centre.* 75 p.

Part I treats adult education and the New York plan in public lectures, the Cleveland plan, vacation, playgrounds, organized athletics, evening recreation centres, the Rochester Civic and Social Centres, home and school associations, community used schools. The purpose of the second part, as expressed in the title, is first discussion with reference to the agricultural high school, then to district schools in the country, then to rural school extension, to agricultural clubs and housekeeping, then the library, modes of appreciating art, organized recreation. Each part has a good bibliography

The relative strength of nurture and nature, by ETHEL M. ELDERTON. London, Dulau and Co., 1909. 40 p. (University of London, Galton Laboratory for National Eugenics. Eugenics Laboratory Lecture Series III.)

This pamphlet is a vigorous plea for heredity versus education and environment. The author says "so far as our investigations have gone, they show clearly the small influence of environment." The heredity factor is everywhere preponderant and "it is not at all easy to say that any of the environmental factors we have measured up to the present time have any important effect on the child." "Improvement in social conditions will not compensate for bad heredity." The author's studies have chiefly been of factory children in the lowest classes.

French University degrees. (*A handbook of information for foreigners*) Pub. by The Comité de patronage des etudiants etrangers. Paris, 1910. Second edition. 115 p.

This pamphlet begins with the University of Paris, describing what is required for the doctorate in letters, science, pharmacy, medicine, the certificate of studies, the diploma of colonial medicine, of legal medicine, of chemistry, the certificate of penal science, the diploma of pharmacology for foreigners, and the diploma of university studies in letters. Fourteen other French universities, some of which give but one and some about as many degrees as that of Paris, are treated the same way.

The obvious Orient, by ALBERT BUSHNELL HART. New York, D. Appleton & Co., 1911. 369 p.

The author made an eight months trip east and sets down his impressions. The first 80 pages are devoted to the Pacific Coast. He next describes

Japan, then China, then the American and British Colonies. These are rather more than notes of travel and have the advantage of being written by a professor of history who has given some attention to the subject. The great interest in the East now almost makes any personal contribution of this sort more or less valuable.

The evolution of literature, by A. S. MACKENZIE. New York, T. Y. Crowell, 1911. 440 p.

This book appeals to those who have grown weary of beaten pathways and affords an intelligible view of what is usually termed comparative literature to which, we are told, an adequate manual has until now been lacking. The development of literature is correlated with that of society, as indeed it should be. The writer begins with primitive man and primitive literature in Africa, Oceanica, Asia, America, primitive art, dance, drama, barbaric literature in Oceanica, in Asia, in America, barbaric dance, and drama, autocratic literature and its data, democratic literature and its data, from which he evolves certain provisional laws. It will thus be seen that the author limits his survey essentially to literature in very primitive conditions and in very primitive forms.

Love's pilgrimage; a novel, by UPTON SINCLAIR. New York, M. Kennerley, 1911. 663 p.

This is a novel concerned almost exclusively with the relations of a splendid and affectionate young wife and a husband who has about all the eccentricities and unpracticalities of genius. It is a pitiful story of struggles with poverty and disappointment. His love for her is a very accessory thing in his soul, which is almost entirely fixed upon literary ambitions which he is unable to realize. They live in tents in summer in the simplest way. In the winter, he is often gone from her for months at a time. The chief feature of the book, however, is the frankness with which it deals with the sex problem in its various aspects. The details of a temptation which the hero, a pure young man, resisted, and again of the consummation of the marriage relation seem to the writer of this note to have no excuse but to be simply and directly inflammatory, while the score of pages devoted to the birth scene with all kinds of medical details seems to have no *raison d'etre* and should the novel become popular and have any general social influence, it cannot but tend directly to magnify the already too great phobia against child-bearing on the part of women who read it.

Position of woman; actual and ideal; with preface by SIR OLIVER LODGE. London, Nisbet, 1911. 170 p.

Eight writers here, men and women, attempt to survey and discuss the general position of women and their claims. These papers, which were addressed at as many different meetings are here printed. The topics are the position of woman biologically, in history, in the family, in the professions, the psychological dangers to women in modern social development, her education, spiritual motherhood and philanthropic service, and a general closing address by Richard Lodge. The tone of all the papers is very temperate.

The education of a music lover, by EDWARD DICKINSON. New York, Charles Scribner's Sons, 1911. 294 p.

After an introductory chapter on the new musical education, the following topics are discussed: the music lover's need of education, definite hearing, the problem of form, beauty of melody and rhythm, harmony, performance, the art of the pianist, the art of song, music and poetry, the technique of the singer, problem of expression, representative music, music and history and biography, the music lover and the higher law.

Penal and reformatory institutions, edited by Charles Richmond Henderson. Correction and prevention, four volumes prepared for the Eighth International Prison Congress. N. Y., Charities Publication Committee, 1910. 345 p. (Russell Sage Foundation.)

Correction and prevention is the title of this work. In this volume will be found accounts by specialists of the institutions of correction through which the criminal law is enforced. The story is not boastful but critical, the weak points being faithfully disclosed. We have no national system but most of the book is devoted to reformatory prisons in the northern states of the Union. One expert traces the evolution of the older prison system and the beginning of reforms; others describe the principles of the indeterminate sentence; another, prisons for women. Other topics are the prison physician, educational work in prison, labor, officers and discipline, workhouse, police system, congregate system, the released prisoner.

Correction and prevention, edited by Charles Richmond Henderson. Four volumes prepared for the Eighth International Prison Congress. N. Y., Charities Publication Committee, 1910. 168, 119 p. (Russel Sage Foundation.)

After an historical introduction by F. H. Wines and the statement of the declaration of principles promulgated at Cincinnati in 1870, F. B. Sanborn describes the work of Mr. Wines; Z. R. Brockway, the American reformatory prison system; F. H. Wines, possible and actual penalties for crime; Paul U. Kellogg describes the work of S. J. Barrows; W. M. F. Round that of General R. B. Hayes, and six biographies follow. The work contains a number of interesting illustrations.

Preventive treatment of neglected children, by HASTINGS H. HART, with special papers by leading authorities. Correction and prevention, four volumes prepared by the Eighth International Prison Congress. N. Y., Charities Publication Committee, 1910. 419 p. (Russell Sage Foundation.)

The first part treats institutions for delinquent children of both sexes including the George Junior Republic; the next, public and private institutions for dependent children; the third, the cottage and congregate institutions for both classes; fourth, child helping societies and homes; fifth, family care, placing out system; sixth, juvenile court; seventh, miscellaneous preventive agencies. One chapter gives a brief though very inadequate account of the study of children.

American embassies, legations, and consulates mean better foreign business; an argument in pictures and photographs by the AMERICAN EMBASSY ASSOCIATION, N. Y. 1911. 187 p.

It is a good thing for this country to show up to the world the inferior status of official residences of our representatives abroad and the very great imperfections of organization in the various offices and the preparation of their heads.

The Lady, studies of certain significant phases of her history. By EMILY JAMES PUTNAM. New York, Sturgis & Walton Co., 1910. 323 p.

The writer characterizes in the various chapters the ideals of ladies of different lands and ages with illustrations, the Greek and Roman lady, the abbess, the lady of the castle, Renaissance, the salon, the blue stocking, slave states, etc.

Seven great foundations, by LEONARD P. AYRES. New York, Dept. of Child Hygiene, Russell Sage Foundation, 1911. 79 p.

This is a very interesting account of the following seven funds; Peabody Education Fund; John F. Slater Fund for the Education of Freedmen; Carnegie Institution of Washington; The General Education Board;

Carnegie Foundation for the Advancement of Teaching; Russell Sage Foundation; Anna T. Jeanes Foundation. It is a great convenience to all interested to have these seven articles of the able author bound up together.

The Grecians, by JAMES ELROY FLECKER. London, J. M. Dent & Sons, Ltd., 1910. 140 p.

These dialogues discuss the aim of education, physical, technical, and points to the Greeks as the embodiment of the very highest ideal. The author has tried to make his dialogues very lively and sprightly, with a good deal of feeling, tone and color.

The vocabulary of high school Latin, by GONZALEZ LODGE. Rev. Ed. Pub. by Teachers College, Columbia University, N. Y., 1909. 217 p. (Contributions to Education. Teachers College Series.)

The aim of this work is to set forth a complete vocabulary of Cæsar's Gallic War, Cicero's six orations and the first six books of Virgil. Statistics are given of the number of times every word occurs and a selection of 2,000 words has been made comprising usually those most frequent so arranged that they can be taught at the rate of so many per year. The total number of words is 4,650, of which 849 occur in all three authors, 638 in Cæsar and Cicero, only 384 in Cæsar and Virgil, etc. The number of words occurring five times or more is surprisingly small, but these are the essential words in Latin. A student commanding the above 2,000 will have a vocabulary of all the ordinary Latin he is likely to meet and really much more because of compound words. This bears on the question of reading Latin at sight. The only criticism we have to suggest is that the English equivalent is not repeated in the appendix beginning on page 189 where the vocabulary is arranged in the order of occurrence.

An anthology of modern English prose (1741 to 1892), by ANNIE BARNETT and LUCY DALE. London, Longmans, Green and Co., 1911. 450 p.

This anthology, with a similar collecton from earlier writers which is to follow it, is designed to take a middle place between the small treasuries that can be put in the pocket and the larger series that are available for more severe and special studies. The selections here begin with those of Samuel Richardson (deceased 1761) and end with those of Robert Louis Stevenson (deceased 1894), about fifty authors in all.

The study of history in secondary schools; report to the American Historical Association by a committee of five. New York, Macmillan Co., 1911. 72 p.

This report is written chiefly by professors in universities—three of them—with one principal of a high school. We cannot understand why high school teachers are not themselves competent to determine what their pupils should do in this as in other topics. This report is simply rattling the old chains and while it marks time a little, makes almost no progress toward the solution of one of the most important and yet one of the simplest of all pedgagogic problems, provided only it could be left to the solution of those most competent to handle it.

High School exercises in grammar, by MAUDE M. FRANK. New York, Longmans Green, & Co., 1911. 198 p.

This book is designed for those who believe that the study of grammar should be continued in the high school. It therefore reviews the work that is supposed to have been given in lower grades and develops it still further. It purveys material needed for rapid and intensive work, which is believed to be the most practicable and profitable in the high school. Sentences mostly selected from standard authors have been arranged to illustrate forms and construction of language in the general chapters, the verb and its complements, noun, pronoun, adjective, adverb, preposition, interjection. The final chapter is on variety of use and a series of diagrams.

Seventy-fourth annual report of the Board of Education. Mass., 1909-1910. Boston, Wright & Potter, Printing Co., Jan., 1911. Public Document No. 2, 296, 131 p.

This report is of special interest as it is the first of David Snedden, the new Commissioner of Education, whose contribution takes up the first 90 pages of the work.

Brazil, by PIERRE DENIS. Translated, and with a historical chapter, by Bernard Miall and a supplementary chapter by Dawson A. Vindin. London, T. Fisher Unwin, 1911. 388 p.

The relations expressed by the passive voice, by EDWARD T. OWEN. Reprinted from Vol. 17, Part I, of the Transactions of the Wisconsin Academy of Sciences, Arts and Letters. July 1910. 71 p.

List of members of the American Medico Psychological Association. March, 1911.

A Spanish grammar, by JOHN WARREN. London, Longmans, Green & Co., 1910. 230 p. (Longmans' Commercial Series, edited by Alfred Nixon.)

A world-correspondence of women-students. Association of women students in Leyden. Rotterdam, W. L. &. J. Brusse, 1910. 263 p.

La Jeunesse de Shelley, par A. KOSZUL. Paris Librarie, Bloud et Cie, 1910. 439 p.

Geoffrey Chaucer, par E. LEGOUIS. Paris, Bloud et Cie, 1910. 261 p.

Les Sœurs Brontë, par E. DIMNET. Paris, Bloud et Cie, 1910. 276 p. (Écrivains Étrangers.)

Some commentaries on the teaching of piano-forte technique, by TOBIAS MATTHAY. London, Longmans, Green, and Co., 1911. 55 p.

Sandalion: eine offene Antwort auf die Falschungs-Anklagen der Jesuiten. Von ERNEST HAECKEL. Frankfurt a. M., Verlag G. m. b. H. 1910. 55 p.

Praktische Anleitung zur Syphilisdiagnose auf biologischem Wege, von P. MULZER. Berlin, Julius Springer, 1910. 128 p.

The Carnegie Foundation for the Advancement of Teaching. Fourth annual report of the president and of the treasurer, November, 1909. Boston, D. B. Updike, Merrymount Press, 1909. 201 p.

Report of the Commissioner of Education for the year ending June 30, 1910. Vol. I, Whole number 442. Washington, D. C., Government Printing Office, 1910. 662 p.

"Obscene" literature and constitutional law. A forensic defence of the freedom of the press, by THEODORE SCHROEDER. New York, privately printed for forensic uses. 439 p.

Truths: talks with a boy concerning himself. By E. B. LOWRY, M. D. Chicago, Forbes & Co., 1911. 95 p.

Confidences: talks with a young girl concerning herself. By EDITH B. LOWRY, M. D. Chicago, Forbes & Co., 1911. 94 p.

An anthology of modern English prose (1741-1892) by ANNIE BARNETT and LUCY DALE. New York, Longmans, Green & Co., 1911. 451 p.

The social evil in Chicago: study of existing conditions with recommendations by the Vice Commission of Chicago. Chicago, Gunthorp-Warren Printing Company, 1911. 399 p.

Second course in algebra, by HERBERT E. HAWKES, WILLIAM A. LUBY, and FRANK C. TOUTON. Boston, Ginn & Co., 1911. 264 p.

Mothers in council. London, Wells Gardner, Darton & Co., Ltd., 1910. Volume XX, 256 p.

Enquête sur l'alimentation de 1605 ouvriers belges, par A. SLOSSE et E. WAXWEILER. Paris, Marcel Rivière, 1910. 260 p. (Instituts Solvay. Travaux de L'Institut de Sociologie. Fascicule 9 des notes et mémoires recherches sur le travail humain dans l'industrie. Misch & Thron, éditeurs.)

The pupils' arithmetic by JAMES C. BYRNES, JULIA RICHMOND and JOHN S. ROBERTS. New York, the Macmillan Co., 1911. Book 3, 256 p. Book 4, 235 p.

Second course in algebra, by HERBERT E. HAWKES, WILLIAM A. LUBY and FRANK C. TOUTON. Boston, Ginn & Co., 1911. 264 p.

THE

PEDAGOGICAL SEMINARY

Founded and Edited by G. STANLEY HALL

VOL. XVIII SEPTEMBER, 1911 NO. 3

HEALTH INSPECTION OF SCHOOLS IN THE UNITED STATES[1]

By GEORGE H. SHAFER, Fellow in Clark University

HISTORICAL AND LEGAL SURVEY

Health inspection of schools in the United States was initiated in Boston (15) by the board of health in 1894, when the city was divided into fifty districts and an inspector assigned to each district. The aim was to detect and eliminate cases of contagious diseases in their incipient stages. The state law of 1906 added the further duty of separately and carefully testing and examining every child in the public schools "at least once in every school year to ascertain whether he is suffering from defective sight or hearing or from any other disability or defect tending to prevent his receiving the full benefit of his school work." In 1907 the school committee of Boston established a department of school hygiene, the object of which was to put under the direction of an expert in school hygiene all those functions of the school which had to do with the physical (19) welfare of school children, and to co-operate with teachers in applying health principles to educational processes. Its activities extend beyond the schoolhouse and beyond school hours to the playgrounds and to summer vacations. It also attempts home extension work on quite an extensive scale. Thus Boston at once furnishes us a concrete example of the two main ideas in health inspection: the protection of the community from infectious diseases through the schools, and expert supervision of health and development processes.

---

[1] In this study an attempt is made to give the more essential facts and to discuss some of the most important problems involved in health inspection of schools in the United States. I wish to express my indebtedness to President G. Stanley Hall under whose direction the study was undertaken; to Dr. William H. Burnham and to Dr. Theodate L. Smith for valuable suggestions and encouragement; also to Dr. S. Josephine Baker, the very efficient and farsighted Director of Child Hygiene of New York City, who put at my disposal every opportunity for a first hand study of the New York system.

New York City (15) followed Boston in establishing a system of health inspection for the detection and elimination of contagious diseases in 1897, and in the establishment of a department of child hygiene in 1908. Chicago began the work of inspection for contagious disesases in 1895 and Philadelphia in 1898. At present there are over four hundred towns and cities in the United States having some sort of health inspection.

In 1899 the legislature of Connecticut (15) passed a law requiring superintendents, principals or teachers to test the eyesight of all pupils in the school during the fall term and to notify in writing, the parent or guardian of every pupil found defective. The tests were to be made triannually, and the state board of education was to furnish the materials necessary and to give instruction for their use. In 1907 a second law passed the legislature. This law authorized the "board of education or town schoool committee of any town, or the board of education or committee of any school district, to appoint one or more school physicians." The law also provides for the appointment of school nurses. The school physician is "to examine all pupils referred to him by principals and teachers, to make such further examination of teachers, janitors and school buildings as in his opinion the health of the pupils may require."

"The school authorities of any town or school district which has appointed a school physician in accordance with the provisions of this act, shall cause every child attending the public schools therein to be separately and carefully tested and examined at least once in every school year, to ascertain whether such child is suffering from defective sight or hearing, or from any other physical disability tending to prevent such child from receiving the full benefit of school work, or requiring a modification of such school work in order to prevent injury to the child or to secure the best educational results." Notices of defects or disease must be sent to parents with "such advice or order relating thereto as the physician may deem advisable."

In 1904 Vermont enacted a law requiring that the superintendent, principal, or teacher of a public school shall test the sight and hearing of every pupil in the school annually in the month of September. Parents must be notified.

Massachusetts was the first state to enact a mandatory health inspection law. The law was enacted in 1906. It makes the school committee responsible for the appointment of inspectors in all towns, and in all cities where the board of health fails to do so. Every child in the public schools must be "separately and carefully tested and examined," at least once each school year, for defects and disabilities which might interfere with school progress. Tests of sight and hearing are made by the teachers. Parents must be notified in all cases of disease and defects, and "a physical record of each child must be kept in such form as the state board of education shall prescribe." This law, while mandatory in form, made health inspection dependent upon an appropriation in cities by the city council, and in towns by the town meeting. In 1908 this clause was repealed, making the law really mandatory. In 1910 the law was amended so as to include examination for health certificates.

The legislature of New Jersey (15) passed a law in 1903 making health inspection permissive. In 1909 a second law was passed as follows:

"Every board of education shall employ a competent physician to be known as the medical inspector, and fix his salary and term of office. Every board of education shall adopt rules for the government of the medical inspector, which rules shall be submitted to the State Board of Education for approval.

"The medical inspector shall examine every pupil to learn whether any physical defect exists, and keep a record from year to year of the growth and development of such pupil, which record shall be the property of the board of education, and shall be delivered by said medical inspector to his successor in office. Said inspector shall lecture before the teachers at such times as may be designated by the board of education, instructing them concerning the methods employed to detect the first signs of communicable disease, and the recognized measures for the promotion of health and the prevention of disease. The board of education may appoint more than one medical inspector. A board of education may exclude from school any child whose presence in the schoolroom shall be certified by the medical inspector as detrimental to the health or cleanliness of the pupils in the school, and shall notify the parent, gaurdian or other person having control of such child of the reasons therefor. If the cause for exclusion is such that it can be remedied, and the parent, guardian or other person having control of the child excluded as aforesaid shall fail or neglect within a reasonable time to have the cause for such exclusion removed, such parent, guardian or other person shall be proceeded against and upon conviction, be punishable as a disorderly person."

Maine enacted a statute in 1909 resembling the Massachusetts act of 1906, with the exceptions that it is permissive, applies only to cities and towns having a population of less than forty thousand inhabitants, and that sight and hearing tests may be made either by the teachers or physicians.

In 1909 the legislature of Colorado passed a law requiring "every teacher in the public schools" to "report the mental, moral and physical defectiveness of any child under his supervision, as soon as such defectiveness is apparent to the principal, or where there is no principal, to the county superintendent." The principal or superintendent notifies the parent or guardian of such defectiveness and advises an examination "by a competent physician or surgeon, with special reference to eyes, ears, nose, throat, teeth and spine." If the parent or guardian neglects to follow this advice, it is the duty of the principal to notify the state bureau of child and animal protection which then takes up the matter.

The legislature of California enacted a law in 1909 authorizing boards of education to establish health and development supervision in the public schools, to employ an examining staff and other necessary employees, and to fix their salaries. It advises that, where practicable, the examining staff should consist of both educators and physicians. Health and development supervision is defined as follows:

"1. To secure the correction of developmental and acquired defects of both pupils and teachers which interfere with health, growth and efficiency, by complete physical examination. Such examinations shall occur annually, or as often as may be determined by the board of school trustees or city board of education."

"2. To adjust school activities to health and growth needs and to development processes and to attend to all matters pertaining to school hygiene."

"3. To bring about a special study of mental retardation and deviation of pupils in the public schools."

With regard to the certification of members of the examining staff, the law provides that:

"County or city and county boards of education are hereby authorized to grant health and development certificates to holders of life diplomas of California of the high school or grammar grades, or to holders of California certificates to practice medicine and surgery who shall present with such life diplomas or with such certificates to practice medicine and surgery a recommendation from the state board of education certifying special fitness for the work specified in the act."

The law of Utah provides that "the local boards of health shall have jurisdiction in all matters pertaining to the preservation of health of those in attendance upon the public and private schools in the state," and makes it the duty of each local board of health to exclude from school any person suffering from an infectious or contagious disease, and to inspect all school buildings and premises as to their hygienic conditions.

In 1910 boards of education in New York State were authorized "To provide for the medical inspection of all children in attendance upon schools under their supervision whenever in their judgment such inspection shall be necessary, and to pay any expense incurred therefor out of funds authorized by the voters of the district or city, or which may properly be set aside for such purpose by the common council or the board of estimate and apportionment of the city."

The school law of Ohio provides for health inspection as follows:

"Any board of education in a city school district may provide for the medical inspection of pupils attending the public schools. For that purpose it can employ competent physicians, nurses, and provide for and pay all expenses incident thereto from the public school funds, or by agreement with the board of health or other board, or officer performing the functions of a board of health for such city. It may provide for medical and sanitary supervision and inspection of the schools which are under the control of such board of education and of the pupils attending such schools, by a competent physician selected by the parent or guardian of the child, but on failure of the parent or guardian, then by the district physicians and other employees to be appointed by such board of health."

In the state of Washington the law provides for health inspection in school districts of the first class of which there are nine.

The recent legislature of North Dakota has passed a law making health inspection by the local board of education permissive in all the schools of the state. It enjoins upon county superintendents of schools the duty of co-operating with school boards in promoting health inspection, and suggests an arrangement of schools in groups for the purpose of inspection, especially in rural districts.

Bills relative to health inspection of schools are at present pending in the legislatures of Pennsylvania, Rhode Island and West Virginia.

From the foregoing survey we see that legislation with regard to health inspection of schools in the United States, has made considerable progress within the last five years. There are, however, only two states, if we exclude Colorado (where no physicians or experts are employed), which have enacted mandatory legislation.

A careful study of the facts revealed by the examination of pupils in the public schools, can scarcely fail to bring the conviction that health inspection and supervision of schools and pupils is of the utmost importance, and that there certainly should be legislation in every state and territory making it as easy as possible for any community to take up the work whenever it chooses to do so. But mandatory legislation, while it should be a conscious goal, ought not to be brought about prematurely; for premature legislation is bound to result in reaction injurious to the cause. A law which does not first exist as a conviction in the hearts of a majority of thinking citizens is not worth putting on paper. Our statute books are full of laws, good laws perhaps, but dead because they did not have the initial momentum to launch them securely. When intelligent interest has been aroused then it will be well to seek mandatory legislation.

We are not referring here to the opposition to legislation coming from special interests, but to the apathy and the honest conviction of intelligent citizens. It is the appeal of the easy, short cut, and spectacular that makes us go to the legislature with every new civic duty of which we become conscious. We throw our responsibilities upon the legislature as the ancient Hebrews used to transfer their sins to the scapegoat. It is not mandatory legislation with respect to health inspection that we need at present, but real scientific investigation and demonstration, and the dissemination of facts, not overdrawn statements of overzealous reformers, but real facts.

Some maintain that state intervention with regard to the health conditions of the child, and especially with regard to his hygienic environment in the home, tends to destroy the sanctity and the responsibility of the home, and is contrary to the principles of our government. On the contrary, it is quite in accord with the precedent established with the founding of our public school system. As well might we argue that education at public expense, and especially compulsory education, tends to destroy the sanctity and responsibility of the home; and yet, the institution of the public school, with compulsory education, is to-day regarded as absolutely essential to the very maintenance of our government.

Control

In several states, as we have seen, laws have been passed regulating the control of health inspection in the schools, but for the most part it is a matter for local adjustment. There are at present three methods of control in vogue. First, by the board of health; second, by the board of education; and third, by a division of the work between the board of health and the board of education.

In Massachusetts the law gives control to the board of health in cities and to the school committee in towns. In New Jersey the board of education has complete control. In California all matters pertaining to infectious and contagious diseases are left to the board of health, while the health and development work is controlled by the board of education.

Where there is no state legislation the same classification will hold.

In general it may be said, that in the older and larger cities of the east and middle west the board of health controls, whereas in the smaller cities of the east and the newer cities of the south and west the board of education controls. The reason for this is obvious. Health inspection of schools began in these larger and older cities where boards of health were better organized, and where, on account of congested conditions and a heterogeneous population, the matter of protection from infectious and contagious diseases became imperative. Although in its beginning it was purely a protective measure, when there came an awakening to the larger health problems in the schools it was but natural for the teacher to turn to the only existing agency for help and advice; so there grew up under the control of the board of health a more or less complete system of heath inspection. The smaller cities of the east and the newer cities of the south and west came later to a realization of health needs. Boards of health were not forced by the exigencies of the situation to take the initiative. The appeal came first from the educational point of view and boards of education took the initiative.

There is still a considerable difference of opinion with regard to the best agency of control, and in some quarters the contest between the board of health and the board of education is rather sharp.

It is argued on the one hand that all matters pertaining to the health of the community are a direct concern of the board of health. It alone has legal authority to quarantine and to control health conditions; to leave any part of this work to any other agency would weaken authority and cause confusion. The reply to this argument is, that the matter of infectious and contagious disease is only a small fraction of the whole problem, and that the larger phase of health and development is distinctively an educational problem and as such can be dealt with efficiently only from the educational point of view. The immediate and vital problem from the educational point of view is the adjustment of school activities to the physiological and mental needs of the individual pupil. This can never be accomplished by a division of authority at the most vital point. Either the physician must turn educator and assume the responsibilities of superintendent of schools, or he must be *en rapport* with the educator and work to the end that the latter may take his results and apply them to educational problems. The field is too large for one man. There must be a division of labor; but, what is still more important, there must be unity of purpose.

It is argued again that the board of health is an agency already in the field; to create a department of health inspection under the board of education would mean a duplication of agencies and an unnecessary expenditure of money. To this it may be answered that the board of education is also an existing agency with a system of supervision which could take care of health work in the schools with no less economy and efficiency than the board of health.

Again it is urged that educators cannot see the medical point of view, that they are not alive to the real problems at issue, and that control by the board of education would mean unprofessional and narrow control, hampering the physician in his work, turning it into narrow channels and so largely defeating its own end. On the other hand it is urged that the officials of the board of health do not have the proper perspective, that they have a live interest only in the detection and elimination of contagious diseases and that they are apathetic toward the larger educational aspects of the problem.

We find the same criticism in England where, in some cities, the medical officer of health also performs the duties of school medical officer. "In spite of the general excellence of the routine work in the larger cities where the medical officer of health has been appointed school medical officer, the reports with a few notable exceptions show a singular absence of originality and initiative, and of any special interest in educational progress. On the other hand, exclusive attention is given to certain aspects of the work, especially those concerning infectious diseases, sanitation and statistics."[1] It is stated in the same report that these inspectors do not keep in touch with the teachers.

To sum up, it seems to be the general opinion that all matters pertaining to infectious and contagious diseases should remain under the control of the board of health, but with respect to the more complete health supervision of school children there is a difference of opinion. Since the value of health inspection from the educational point of view depends upon the application by teachers and educators of the results of individual examinations to the individual pupil, it is absolutely essential that there should be no serious break between examination and application. The examiner must be able to make his examinations with the educational problems clearly in mind, and the educator must be in a receptive attitude with regard to the results of the examiner. Whether or not this can be accomplished where boards of health control health inspection in schools still remains to be proved. The present tendency seems to be in the direction of a division of the work, leaving to boards of health the control of all matters pertaining to infectious and contagious diseases, and assigning to boards of education those health problems which more vitally concern the educator.

---

[1] School Hygiene, London, Dec. 1910.

ORGANIZATION

Under this heading a number of representative systems of health inspection in the United States are described.

In a number of smaller places the work is entirely done by nurses employed by the board of education and under the general supervision of the superintendent of schools: Champaign, Illinois,—2,081 pupils, and Des Moines, Iowa,—16,672, pupils,[1] furnish examples of this method.

The board of education of Trenton, New Jersey,—13,241 pupils, employs eight inspectors at an annual salary of $200 each, and two nurses at an annual salary of $600 and $700 respectively. The work is done under certain rules established by the state board of education and augmented by the local board, but there is no separate organization.

In Detroit, Michigan,—57,996 pupils—the board of health appoints twenty-seven inspectors at a salary of $30 each, per month, and six nurses at a salary of $75 each, per month, working under the general direction of the board of health.

The board of education of Dayton, Ohio—15,448 pupils—employs one full time medical inspector at an annual salary of $2,000. He works entirely from the educational point of view and has nothing whatever to do with contagious diseases. There are no nurses, but teachers are expected to do "follow up" work.

St. Paul, Minnesota,—28,518 pupils—employs one inspector at high school teachers' schedule of salary, who devotes three hours each school day to the work, and holds office hours on Saturday morning from 9 to 12 o'clock. Three nurses are employed on grade teachers' salary. The inspector examines pupils reported to him by the teachers, and also makes general physical examinations in certain schools. The work is controlled by the board of education.

The board of education of Lincoln, Nebraska, appoints two chief medical inspectors who, with the superintendent of schools, constitute a board of medical inspection. This board recommends as many inspectors as may be deemed necessary to carry out the provisions of these rules, and upon the approval of the board of education, the inspectors so selected, shall be appointed and assigned to school buildings to serve for one year. The work is entirely gratis.

---

[1] Statistics taken from report of U. S. Commissioners of Ed., *1910*.

The City of Chicago, Illinois,—301,172 pupils—is divided by the board of health for the purpose of health inspection into one hundred districts. Each district is in charge of an inspector at a salary of $66.66 per month. There are five supervising inspectors at a salary of $100 each per month. There are also three supervising nurses at $100 each per month and sixty nurses at $70 each, per month.

The nurses give their entire time to the work, being employed during vacation in child welfare work. The inspectors devote four or more hours per day to the service. Here medical inspection is not differentiated from supervision of communicable diseases. Each inspector is responsible for all communicable diseases occurring in his district, whether found in school or reported through other channels. "Each morning and evening the location of contagious diseases reported to the department of physicians will be telephoned to the medical inspector in the district from which the case was reported. He will then promptly visit all cases reported in his district and establish quarantine." A general physical examination of each pupil in the grades of the public schools is made once a year.

New York City,—744,148 pupils—has established a division of child hygiene as an integral part of the department of health. This division is entirely separate from the division of communicable diseases, and co-operates with that division in the same way as the department of health inspection under the board of education in other cities co-operates with the department of health.

The staff of the division includes, at present, one hundred and sixty-one medical inspectors; one hundred and forty-two nurses, and they are organized as follows: (5)

A chief of the division who has the administrative control of the work throughout the city, receiving a salary of $3,000. There are five borough chiefs at an annual salary of from $1,500 to $2,000 each. The borough chief is in charge of the work in a borough, and is directly responsible to the chief of the division.

There are eleven supervising inspectors at an annual salary of $1,500 each, they are under the direction of the borough chief and in charge of a squad of from ten to fifteen inspectors, each inspector receiving an annual salary of $1,200.

The superintendent of nurses receives an annual salary of $1,200. She is in charge of the work of the nurses throughout the city, and is directly responsible to the chief of the division. There are seven supervising nurses and a corps of active nurses.

The activities of the division of child hygiene include more than the medical inspection of school children. The plan includes "a comprehensive supervision of the health of the child from birth to puberty in so far as a municipal health department" can "control the conditions of child life." (5)

The board of education employs a director of special classes, and a specialist in nervous diseases. The division of hygiene also co-operates with the department of physical culture and with the attendance department.

The board of education of St. Louis, Missouri,—87,931 pupils—has established a department of school hygiene as a division of the department of instruction. There is a supervisor of hygiene at an annual salary of $2,600. There are six inspectors at a graded salary of $1,200 each for the first year, $1,300 for the second year, $1,400 for the third year and $1,500 for the fourth year. There are also five nurses. The rules of the board of education relating to suspension and removal of teachers applies to the supervisor, inspector and nurses in the department, and the department is at all times subject to such rules as the superintendent of instruction, with the approval of the board of education, may make. The department maintains a bacteriological laboratory; examines all pupils in certain districts once a year for physical defects; examines daily all evidences of the presence in the schools of communicable diseases, and reports to the board of health. It examines the sanitary condition of the school premises, it looks after the special schools, articulates with the attendance department and with the physical training department, and co-operates with the city health department in case of contagious disease.

Los Angeles (25), California,—49,268 pupils—represents rather a unique organization. The department of health and development created by the board of education is under the supervision of a director who has the authority to make direct applications to school work. "The examining staff of this division contains both educators and school physicians, and its work involves the close co-operation of this staff with the teaching force of the city." A medical anthropometrical laboratory with a very elaborate outfit of apparatus for medical examinations and psychological tests is maintained. The field of work involves defective sense organs, nervous system and general health, normal and defective growth, the adjustment of school activities to the health and growth needs of pupils, the special study of mental retardation and deviation among school pupils.

The city health department employs a corps of inspectors who are in charge of all the work for the prevention and elimination of contagious diseases. This department also employs a corps of nurses who give their time primarily to the work of the department of health and development, and report to both departments.

In looking over these systems we find a considerable variety with regard to organization. While it is not possible to make any very definite classifications here, we may roughly classify the various systems at present in vogue in the United States as follows:

1st. Systems where school medical inspectors have been appointed either by the board of health or by the board of education and assigned to certain districts, but where each inspector is practically autonomous, being supervised by the appointing agency only in a very general way.

2nd. Systems where school medical inspectors have been appointed and are directly supervised either by the city health officer or by the superintendent of instruction.

3rd. Systems which have been organized as distinct departments and are directed by a specialist in child hygiene or school hygiene.

Health inspection in the schools has suffered greatly because of a lack of expert supervision. It is of sufficient importance and intricacy to require the whole time service and the entire interest and energy of a well trained man or woman in at least every city and every county. The present tendencies in organization seem to be in the direction of gathering up all the factors in school which have to do with the physical welfare of the child under one department and placing at the head of this department an expert in school hygiene.

Inspection for Contagious Diseases

The method of procedure in dealing with contagious diseases varies considerably. The simplest method is to have the teacher telephone to the inspector, or notify him by some other method, whenever she finds a suspicious case. The inspector then visits the school and disposes of the case. Another method is to have the inspector get into communication with the principal of each school in his district some time before 10 o'clock A. M. each school day, to find out whether or not his services are required. Where this method is followed the inspector usually is required to visit the class rooms occasionally for the purpose of making a general inspection.

As most of the large cities maintaining a system of inspection for contagious diseases follow a modification of the New York plan, it may be worth while to describe the New York method briefly here. For a more detailed account see Appendix.

The work naturally falls under two headings:

1st. Morning Inspection; 2nd. Routine Inspection

Morning Inspection. New York City is divided into districts, each including two or three schools with an attendance of about five thousand pupils. Each district is assigned to one inspector and one nurse. Each inspector visits each one of his schools every morning before 10 o'clock and examines in a room set apart for that purpose: 1st. All cases of suspected contagious diseases referred by the teacher. 2nd. Children who have been absent from school for several days. 3rd. All children returning after previous exclusion. 4th. All children referred for diagnosis by the nurse.

For convenience, contagious diseases are divided into two classes: Major contagious diseases including small pox, diphtheria, scarlet fever, measles, chicken pox, whooping cough, mumps, and pulmonary tuberculosis in the active stage and: Minor contagious diseases including acute conjunctivitis, trachoma, skin diseases, pediculosis, etc. Cases of major contagious diseases are at once excluded; the inspector immediately telephones the name and address to the borough office of the division of contagious diseases. The division of contagious diseases sends a diagnostician, except in case of diphtheria or pulmonary tuberculosis, in order to confirm the diagnosis. If the diagnosis is confirmed, the case remains under the control of the division, if not confirmed the division issues a certificate allowing the child to return to school at once. In case of diphtheria a culture is taken and the child is excluded. Cases of tuberculosis are excluded and referred for treatment to their family physician or to the department of health clinic. Children affected with contagious eye and skin diseases whose parents have persistently refused to obtain treatment are excluded, and cases of pediculosis with live pediculi may be excluded. Minor contagious diseases under treatment are, as a rule, retained in school excepting very severe cases of scabies and trachoma.[1]

Routine Inspection. A few weeks after school opens each term, giving a little time for adjustment of school activities and for all pupils to become enrolled, a general routine inspection of all children is made by the health inspector. The inspector takes his position in some convenient well lighted corner of the class room. All pupils form in line and file past him for inspection. In passing the pupil shows the palms of his hands and his wrists; pulls down the eyelids exposing the conjunctiva; opens the mouth, and the girls lift the back hair. A separate wooden tongue depressor is used in each case. This routine is repeated by the nurse at least once a month throughout the year.

---

[1] In Chicago the school health inspector is at the same time district inspector for contagious diseases, consequently he follows all major cases to their homes and takes all the responsibility of quarantine and disinfection.

Contagious diseases are designated according to a code. When the physician diagnoses a case he calls out the code number. The teacher records the name of the child with the code number. Children found with symptoms of a major contagious disease are excluded as indicated above. Cases of acute conjunctivitis and of skin diseases are referred to the family physician or to dispensaries, or to the school nurses for treatment. Trachoma is referred to the family physician or to one of the clinics of the board of health. Physicians also visit at their homes pupils who have been absent from school for three or more days.

Examinations for Physical Defects

All the earlier systems of health inspection were established for the sole purpose of controlling contagious diseases. In the majority of cases there was added to this later the examination of all pupils for physical defects. In many of the newer systems, however, especially those established by boards of education, the chief purpose from the beginning has been to discover and remedy such defects as might interfere with growth and development and to adjust school activities to development processes.

It is the consensus of opinion that a complete physical examination of every pupil should be made at certain intervals, and in nearly every case a yearly examination is recommended with special examinations of individual pupils whenever necessary. Some of the smaller cities are actually accomplishing an annual examination of each pupil, but in the larger cities, on account of the small force of inspectors or because inspectors give only a small part of their time to the work, it has not been possible to accomplish this ideal. In New York City about one third of the pupils in the elementary schools are examined each year. In some places congested districts are selected and routine physical examinations are made in these districts, while in other districts only those are examined who are referred by the teachers. In other places no routine physical examination, is undertaken, but pupils are referred to the inspector for such examination, whenever the teacher has any suspicion that defects exist. The scope of this examination varies somewhat, but the schedule prescribed by state board of education of New Jersey may be cited as fairly representative. It includes "a thorough examination of:-

"A. Eyes, for farsightedness and nearsightedness; color blindness; squint, and roughly for astigmatism if suspected; also the condition of the eyelids.

"B. Ear. Acuteness of hearing. Presence or absence of discharge.

"C. Throat. Condition of tonsils. Probable adenoids. Nasal deformities or discharges.

"D. Teeth. Condition and care.

"E. Deformities. Spine, limbs, etc.

"F. Skin. Presence or absence of eruptions. Condition of scalp.

"G. Where practicable, measurements: height, weight and chest measures. Examination of heart and lungs."

To sum up, health inspection for infectious and contagious diseases has been worked out quite thoroughly in some of the older systems. It includes morning inspection of all suspected pupils and regular routine inspection of all pupils at stated times throughout the school year. The larger problem of general health inspection and supervision has thus far been dealt with to a very limited extent, although a good beginning has been made in a number of places, and we may expect better things in the near future.

THE HEALTH INSPECTOR

As a result of a questionnaire sent to one hundred of the pioneer cities in health inspection, we find that so far very little attention has been paid to the special qualifications of health inspector. Buffalo and Chicago require a civil service examination. St. Louis requires a special examination. "No one shall be nominated for, or appointed to, the position of inspector of hygiene, who has not passed sucessfully an examination offered by the board of education to all candidates for such positions. This examination shall be given both as a test of professional training and experience as a physician, and of personal qualifications for this special work."

California is the only state which has taken any steps towards the development of specialists in health inspection and school hygiene. The California law, as we have seen, authorizes boards of education to grant health and development certificates to educators and to physicians who show certain qualifications. This gives the position of health inspector the dignity of a profession, and makes it possible for both physicians and educators to enter the field. The spirit of the law is brought out more clearly in a statement made by its author:

"It would be far more economical of human effort for educators skilled in their work to occupy this field jointly with physicians, the latter taking charge of special classes where a more extensive knowledge of disease is called for, and the educators conducting all the other examinations of growth and development necessary for the intelligent treatment of children and youths. Educators who do this work must be thoroughly trained in physical and mental diagnosis, in physiology and applied hygiene, and in clinical psychology" (25).

Answers from several other localities would indicate at least an idea of some adaptation to the work: "Inspectors must be interested in the work." "Health inspectors must be trained physicians of recognized standing in the community." "High character and efficient service." These are some of the answers, but the typical answer "qualified physician" covers the great bulk of the returns.

The fact that so little thought has been given to the training of the health inspector is evidence that health inspection in the United States is still in its infancy, and that there are all sorts of possibilities for development. We have not as yet attacked the problem in all seriousness. In England the problem is attacked with greater seriousness; adequate salaries are paid; medical men have taken up the work as a profession, and are giving all their energies towards working out an adequate and efficient system, and men are being developed who are expert in school hygiene and who are ready to give efficient and wholesouled service.

Dr. Hogarth sums up the qualifications and duties of the health inspector as conceived by English hygienists as follows:

"He must be observant and receptive not only in regard to the children themselves, but also to their surroundings and conditions of work. His knowledge must be both sound and extensive; he may be almost a specialist in all subjects, without being a faddist in any. He must be broad minded and possessed of a thorough acquaintance with general principles. He must be a rapid facial diagnoser, not necessarily a diagnoser of disease, but a detector of any abnormal condition. He must be interested in educational problems, and must understand the aims and general scope of school work in the various standards. He must be interested in child life, and acquainted with the physiological and psychological development of the child. He plays the part, as it were, of a professional pedagogue. He must show great sympathy and tact. In short, the school doctor's work is partly psychological and partly pedagogical" (20, 152, 154).

English physicians seem to have a comprehensive view of the subjects, and are bold enough to face the problem in its entirety. It may turn out to be too big a field for one man to cover, but that will adjust itself in time. In the meantime, the important thing is to see the whole problem, to enlist men in the work who have a live interest in the problems to be solved, and to pay them a salary sufficiently large to induce them to make health inspection not an avocation but a profession.

The School Nurse

As soon as health inspection was established, it became apparent that there was a great gap between the detection of disease and defects, and the amelioration of such conditions. Simply to know that defects exist, is of very little value unless remedial and educational agencies can be put in operation. It was largely the realization of this need which brought the nurse into the field of health inspection. She has been a great success from the very beginning, and the demand for more nurses, even at the expense of reducing the force of inspectors, comes from every quarter.

Before nurses were employed in New York City (5), a notice of defects found was sent out by the inspector to the parent, with the advice that a family physician be consulted. Under this régime, about 6% of the children requiring it, were treated. During 1909, with the present staff of nurses, 87% of those who were found defective received treatment. In April, 1910, there were sixty-seven cities in the United States employing one or more school nurses.

There is no general uniformity with regard to the duties of the nurse and the limitations of her work. In places where inspectors and nurses are both employed, the nurse usually assists the inspector in routine examinations; in many cases she makes records of defects and prepares notices to be sent to parents. She also makes records for her own use, and permanent records for the school. In some places she makes general inspection of all pupils, selecting such as appear to be defective to be referred to the inspector. She makes routine inspection for contagious diseases and treats minor contagious diseases in school. She recommends to the principal for exclusion, cases of the more serious contagious diseases. In New York City all cases of communicable disease are referred to the inspector for diagnosis before she may treat them, but in some other places she has jurisdiction in all cases of contagious disease, at once treating the minor cases and advising exclusion for suspicious cases of a more serious nature. She holds conferences with teachers and parents at school, giving instruction and personal advice with regard to the health of the children; she gives addresses to parents and pupils on general hygiene. In Boston (19) a course is outlined for this purpose including the following topics: the teeth, diet for growing children, special talks to "Little Mothers" on the care of babies, artificial feeding, home methods of pasteurizing milk, first aid in case of emergencies, the paths by which the body eliminates waste products, sterile water, antiseptic solutions, bandages, emetics, stimulants, artificial heat, etc.

Whenever parents do not respond to notices sent them concerning the defects of their children, she follows them to their homes, sees the parent or guardian, explains the nature of the case, looks into the home conditions of the child which may be responsible for the difficulty, tactfully instructs the mother with regard to the care of the child, gives demonstrations of treatment in some cases, instructs the mother with regard to the proper food for the sick and frequently gives demonstrations in its preparation. If the case has been referred to the family physician and the mother is not able or cannot find time to take the child she offers her services. In some cases she may also nurse the child in the home under the direction of the family physician. If it is a surgical case parents are advised and urged to consult a specialist; if not able to do so the child is referred to a hospital or charitable institution, or in some cities, to a specialist who performs services gratis in such cases (46). Here again the nurse frequently accompanies the child, but she must have a written request before she may do so. In 1910 the nurses of Boston (18) took over 2,500 children to dentists, over 9,000 children to hospitals; they secured the correction of 3,377 cases of defective vision, and 848 cases of defective hearing. In this connection Dr. Harrington says: "All this co-operation has resulted without one complaint of interference, usurpation, or weakening in any manner the unity and sanctity of the home."

The nurse has also proved efficient in increasing the average attendance by visiting children absent from school on account of some minor illness, or sickness in the family. In this way she reaches, and effectively disposes of, cases which have been the bane of the truant officer.

In a few places nurses receive their appointment through a civil service examination, but in most places the only qualification required is graduation from a training school for nurses. The school nurse combines the work of the trained nurse and the social worker; besides, her work as a nurse in school is quite different from the work in private practice, so that her training must be different in order to insure the greatest efficiency. But, as in the case of the school physician, there are at present no institutions giving this special training, and until such provisions have been made she must receive her special training in service.

Dr. Hogarth suggests that her training should consist of "three years' work in a large general hospital of not less than one hundred beds. A period of this hospital training should have been specially devoted either to outpatient work, or to duty in a special department for skin diseases or for orthopædics. In addition to this general training, she requires special training for the further period of at least one year. Six months should have been spent in the wards and outpatients' department of a children's hospital, and for three months she should attend the practice of a hospital for skin diseases, and another three months should be devoted to the study of infectious diseases. After such a systematic course of training, a nurse should be capable of undertaking school duties" (20, 182).

This would no doubt be an excellent training for the work of the school nurse, but it will be some time before such a standard can be set in this country. In large cities where the work is well organized, it seems as though a very efficient system of training might be carried on in connection with the regular work, where graduate nurses might be taken as assistants and a course of instruction and training given by experts. Such a training would have an advantage over the training suggested by Dr. Hogarth in that it would be less artificial, it would increase interest by bringing the nurse sooner into close quarters with her chosen work, and it would be practical.

To sum up, the nurse is an extremely important and a very efficient factor in health inspection. The health inspector discovers needs, the nurse accomplishes results; her work is broader than that of the ordinary hospital or private nurse, it includes both medical and social service. She must be faithful, intelligent, tactful and optimistic.

The Teacher

When health inspection of schools began in the United States, very little thought was given to the part that the teachers might perform in this work. In fact, it was held by some that no part of the work could be satisfactorily done by the teachers, and an attempt was made in several places to get along without their assistance teacher in selecting pupils for examination, but it was soon found that any system of inspection requiring the presence of the physician a sufficient length of time and his contact with individual pupils to a sufficient degree to directly supervise the health of the pupil, would be too costly and would interfere too much with school routine. It was also noted that teachers were much interested in the physical welfare of their pupils wherever their attention was called to the matter. In fact, teachers were found to be among the most enthusiastic advocates of health inspection.

When Massachusetts passed a law requiring health inspection in the schools of the state, it was specified that the tests for sight and hearing should be made by the teachers. Such tests had been made in other states by teachers, but simply because there were no physicians to do the work. In Massachusetts it was deliberately put into the hands of the teachers, and this action was supported by experts. The rules of the state board of education of New Jersey specify that these tests shall be made by the physician, but many cities throughout the country follow the Massachusetts plan.

In present systems the teacher takes a larger share of the responsibility in selecting pupils who need medical care and those who should be inspected for contagious diseases. At most, there is but one routine inspection for contagious diseases per month made by the inspector, or by the nurse as the case may be. In many places there is no routine inspection for contagious diseases, leaving the responsibility for noting symptoms and referring pupils to the inspector for examination, or for excluding them, entirely with the teacher. In other places the inspector or nurse occasionally visits the class rooms and looks them over without making individual inspection, in still other places the inspector calls at the school only when notified by the teacher that suspicious cases have been found.

In the matter of mental and physical defectiveness, the teacher's part is of still greater importance. In some places a general physical examination of all pupils is made annually or biennially, or triennially, by the inspector. In other places there is no general physical examination for all pupils, but only for such as the inspector or nurse may select from general appearance, and such as are referred by the teacher.

In Oshkosh, Wisconsin, all examinations and observations are made by the teachers. "All teachers work under the direction of the director of physical education who instructs them in regard to the examination of eye, ear, nose and throat, supervises play and instructs the teachers in detecting physical defects and signs of disease."[1]

---

[1] Supt. M. N. McIver.

In Colorado, as we have seen, the responsibility for discovering defectiveness rests with the teacher.

The importance of the teacher's part in any system of health inspection is no longer in question. It is entirely a question of the division of labor. Just how far should the teacher be expected to assume responsibility for the physical welfare of her pupils, and to what extent are the services of the school physician required? What division of labor would give us the best results? This is a matter which can be settled only by experience in the light of local conditions, but we may point out some of the factors which will have to be taken into account in the solution of the problem.

It is urged by some that the teacher is already overburdened, that her chief business is to teach, and that she cannot do this effectively if she has other responsibilities. "I wonder," says a recent writer, "if we should hold that teacher culpable who becomes so interested in the training of a child that she forgets winds, dampers, registers, thermometers and thermostats? Teachers and children alike should be furnished buildings properly heated, properly ventilated, and properly cared for from morning to night" (17).

The spirit of this statement is justifiable, and yet therein lurks a danger. Have we not all seen teachers who became so thoroughly absorbed in the subject matter which they were trying to impart that they forgot the individual child? Is it psychologically possible for a teacher to give the health of the child the proper place in school work if she lack the apperceptive appreciation which can come only from first hand knowledge and application of health principles? The problems of education are complex, the factors are many, but if we hope to solve these problems we must take every single factor into account. The ordinary teacher does not need to be a specialist in all lines, but she does need a broad perspective.

Again, the matter of expense is a legitimate matter to consider in any system of health inspection, and it is evident that the more the work done by the teacher the less will be the cost. Much of the work also can probably be done better by the intelligent teacher than by the ordinary school physician. It is maintained by specialists (32) (1) that eye and ear tests can be made to better advantage by teachers than by the school physician, unless he be a specialist. They hold that to make an accurate test of eyes requires "an amount of time and skill few school physicians have at their command for this purpose;" that the ordinary superficial examination with test cards for the mere purpose of detecting defectiveness can be made better by the teacher because she understands the child individually, knows the progress the child is making in the school, has the best possible opportunity to detect symptoms of astigmatism and other defects which would not come out in the ordinary card test; and the results would serve their purpose better because parents, knowing that the test was made by the teacher, would be less likely to depend upon its accuracy and would be more likely to consult a specialist. Besides this, they take into account the subjective effect upon the teacher in impressing upon her the relation of physical defect to school work. It does not seem at all clear why these same arguments would not hold with equal force when applied to the superficial examination for hypertrophied tonsils and adenoids.

On the other hand, the work of the teacher in detecting defects and disease can never be other than superficial. Many of the more hidden defects will go unobserved, defects showing no present symptoms but which in time will become serious; hence the general agreement that a complete physical examination of every child in the public school should be made periodically by a competent physician. The teacher also needs careful supervision and instruction; she needs some one whom she may consult and upon whose judgment she may rely. Her responsibility in this direction must not be too great; for it must never be forgotten that after all the core of her work must always be teaching or training.

But we have assumed in this discussion a degree of knowledge and of skill on the part of the teacher which she does not at present possess. If she is to rise to her opportunity in this direction, she must come to her work with better preparation; or if she finds herself in the work unprepared, she must make efforts to overcome the deficiency.

In the matter of health inspection we are all facing a comparatively new problem, although the needs are as old as the school itself; hence we find all concerned—physician, nurse, teacher and the general public—unprepared to meet it, but it is intensely interesting, offering opportunities for originality and ingenuity for those who have the proper perspective.

The training schools have thus far done very little for the teacher in this important field. Thus far she has been dependent upon the instruction given her by the school physician and by the school nurse. This is valuable, and always will be valuable, but the health factor ought to touch her training in the training school at every point. It is a part of the whole problem of education, and not a separate entity.

AIM

There seem to be in general two aims in medical inspection of schools. The answers to my questionnaire would indicate that in the majority of cases the immediate end is stressed.

The thing that stands out prominently and almost alone in many cases is the immediate prevention of contagious diseases and the correction of physical defects. In a few cases, however, the outlook is broader. The leaders are aiming not only to relieve the immediate situation but to remove the causes which are responsible for the situation as it is. They have a larger perspective; they look upon the social rather than upon the individual side; the educational rather than the pathological side; they hope to see as the result of their efforts not only a decrease in the amount of contagious disease in school and an increase of the efficiency and happiness of the pupils of to-day but they hope through the unique opportunities which this work opens to them to secure better social conditions; to train in habits of thought and action which will make for better health, better home conditions, better citizenship. They are able to touch people where no other agency could possibly touch them, and to bring new ideals and new prospects into their lives.

It is true that no matter how narrow the aim of a system of medical inspection may be, it cannot escape from producing some educational results, and it is also true that the broader aim necessarily includes the narrower; and yet the methods and results, the general tone of the system will be very different depending upon whether the one or the other aim is stressed.

The narrower aim is much more easily justified: the results are immediate and it more easily catches the popular ear. Here are boys and girls who fail to have equal opportunities with their associates because of some remediable physical defects, or because of neglect or malnutrition. The state defeats its own ends by compelling children to attend school without providing that they should at the same time be able to benefit by it. The situation is serious; it is difficult to get parents to act; therefore the state must take the matter in hand. We must in some cases have compulsory treatment; we must have free clinics, free meals, free clothes, free trips to the country, etc.

The broader aim is more difficult to maintain. The results are more remote. Patience and perseverance in the face of criticism are the difficult virtues upon which success depends. Where there is an apparent conflict between immediate relief and the larger educational results the latter must be chosen. Only in extreme cases must financial aid be given. Free treatment is a last resort. The argument is that in a large percentage of cases of neglect it is a matter of lack of responsibility on the part of the parent, due largely to ignorance. Now if you can get the confidence of the parent, if you can make him see the needs of the child, and can arouse him to action without compulsion you have stimulated in him a better self, you have aroused latent motives, you have made that individual a better parent, a better citizen, a more intelligent and happier man or woman.

In New York City the chief of the Division of Child Hygiene is thoroughly alive to this broader view and this explains many of the features of the system.

It explains why there are not more free clinics and dispensaries maintained by the Department. The efforts of the department in this direction have been towards organizing existing agencies and putting people in touch with them. The only free clinics maintained by the department are those for pulmonary tuberculosis, and for trachoma and other eye diseases, and an attempt is now being made to establish free Dental clinics all of which are imperative. It explains further the reason for making so many visits to a single home for the purpose of securing the correction of a single defect and why the instructional and demonstrational phases loom so large.

RESULTS

One of the first results of health inspection was to open the eyes of physicians and school-men to the fact that a very large number of school children are suffering from remediable defects. A few of the more recent results will be sufficient to give us an idea of the extent of defectiveness. An examination into the physical conditions of school children of the school of observation at the University of Pennsylvania (10) in the summer of 1909, shows that, disregarding decayed teeth, 36.5 % were found physically defective. A similar examination of 8,038 school children at Harrisburg, Pennsylvania, in 1909, showed that 27.5% had some defect of sufficient gravity to seriously interfere with their school work." In New York City (5), in 1909, 74% of the children examined were found to have one or more defects. In the same year an examination of 4,582 children in Newark, New Jersey, revealed defects in 53% of the children. (See the annual school report of Harrisburg, 1910, and of Newark, 1909.)

The general order of defects is fairly constant in the various investigations made.

The following table gives the results in a number of representative cases. The figures under each defect show the per cent. of the whole number of children examined who were found defective.

		Defective Teeth	Defective Vision	Hyper. Tonsils	Adenoids	Defective Hearing
Pasadena, Cal.	1909	30	17	6	5	3
Lowell, Mass.	1909	——	10	7	3	3
Newark, N. J.	1909	8.5	13	4	5	1.4
Harrisburg, Pa.	1909	8	30	36	19	7
New York City	1909	54	17	22	19	—
Cleveland, O.	1910	27	27	15.4	8	2.5
School of Observation Univ. of Pa.	1909	38.5	28	5.1	13.5	5.1

The low percentage of defective teeth in the Newark and Harrisburg reports are due to the fact that only very bad cases are reported. The percentages under adenoids for the school of observation of the University of Pennsylvania and for New York City are cases of defective breathing indicating adenoids. The table indicates that defects are found in the following order: Defective teeth, defective vision, hypertrophied tonsils, adenoids, and defective hearing. Other defects are found to a less degree.

Health inspection had not proceeded very far before a relation was observed between physical defectiveness and school progress, and several interesting studies have been made in an attempt to state this relation more definitely.

In 1908 Dr. Leonard P. Ayres (2) examined the records of 8,000 pupils in fifteen schools of Manhattan who had been examined by school physicians, in an endeavor to find the relation between retardation and physical defects. His first conclusions are as follows:

1st. That nearly 80% of the children who were of normal age for their grades were found to have physical defects, while only 75% of retarded children were defective.

2nd. That the percentage of defective children in the lower grades was decidedly greater than in the upper grades, defective vision alone increasing slowly but steadily with advancing age.

These results were entirely unexpected. However, the first is partly explained by the second. The retarded children in any particular grade are, of course, older than the normal children in the same grade, and since defects tend to disappear with age, the retarded children have less defects because they are older.

Dr. Ayres then retabulates the records of all these children between the ages of ten and fourteen, using age instead of grade as the basis and assuming that a child of ten in the second, third, or fourth grade is normal; a child of eleven in the third, fourth, or fifth grade is normal; a child of twelve in the fourth, fifth, or sixth grade is normal, etc. Below these grades he is assumed to be dull, and above he is assumed to be bright. According to this method he finds that the dull pupil has an average of 1.65 defects, the normal child has an average of 1.30 defects, and the bright child has an average of 1.07 defects. In other words, the dull child is found to be much more defective in degree than the normal child, and the normal child more defective than the bright child.

He gives another table showing the relative influence of different defects on school progress as follows:

Defects	Percentage of loss in progress
Enlarged glands	14.9
Defective vision	none
Defective breathing	7.2
Defective teeth	5.9
Hypertrophied tonsils	8.9
Adenoids	14.1
Other defects	.8.5
Average	8.8

He concludes:

"In general, children suffering from physical defects are found to make 8.8% less progress than do children having no physical defects. Children suffering from enlarged glands and adenoids are retarded most. Hypertrophied tonsils, defective breathing and defective teeth are in general somewhat less serious in their effects."

In this investigation, Dr. Ayres does not find any noticeable effect of defective vision on school progress.

In 1909 Dr. Taussig (33) examined the school children of St. Louis County, Mo., limiting his investigations to impaired vision, defective hearing, and well marked adenoids. His findings, so far as they go, correspond fairly well with those of Dr. Ayres with one notable exception. Ayres finds that visual defects increase with age while Taussig finds exactly the opposite results. These figures are based on the assumption that all children are of equal mental capacity, that all children of a certain grade are of equal attainments and further, that defects of a particular kind would have exactly the same results regardless of the degree of defect. What makes the problem still more complex, is the fact that many children suffer from a complication of defects so that these results can be interpreted only in a very general way.

While no very definite results on a large scale have yet been worked out to show the relation between school progress and the general welfare of the child on the one hand, and physical defects on the other, concrete evidence of individual cases is plentiful showing almost phenomenal changes in intellectual activity and general character resulting from the correction of physical defects.

But finding defects and showing the relation between defectiveness and the general welfare of the child, while in itself worth while from an educational point of view, is not sufficient to meet present needs. One of the first discouragements to come to the school physician was the fact that very few practical results were accomplished. Parents did not respond readily to information given them with regard to the welfare of their children, and in order to overcome the inertia of parents in this respect, the follow up system was established, through which immediate practical results, as well as fundamental educational results, are accomplished. In this way from fifty to eighty per cent. of those children found defective secure treatment.

The most apparent results are shown in the case of minor contagious diseases. In New York City (5) during the first half of the year 1909, 329,848 cases of eye and skin diseases were found, and during the second half of the same year only 121,667 cases were found; a decrease of over 60%, and this is the more remarkable if we remember that the second half year follows the summer vacation. Besides this, cases found during the present year are reported to be of a much milder type. Similar results are shown with regard to pediculosis, and it is generally reported that the personal appearance of the children, especially in congested districts, has improved remarkably.

While the immediate practical results which are manifest in defects remedied, in brighter and happier faces, in greater interest, in better conduct, are great; the educational results, especially where adequate home extension work is done, are of even greater importance. This work links the home with the school; it increases the responsibility of parents by increasing their knowledge; it calls the attention of negligent parents to the fact that they cannot neglect their children without the censure of society, in which they themselves must live. If parents can be brought to sacrifice for their children intelligently, they cannot help thereby acquiring a deeper affection for them: this often marks the beginning of life on a higher plane.

A most excellent statement of what health inspection is accomplishing from the educational point of view is given by Superintendent Mackey, of Trenton, New Jersey. He says: "It emphasizes the importance of good health; the relation of health to efficiency, and that of adult life to child life, and of moral, mental, and spiritual welfare to physical well being. It creates new ideals and new standards of health, and gives an inspiring vision of a more abundant life. It tends to give a clearer, more convincing, more widespread conception of the relation and responsibilities of individuals to human welfare and to promote more intelligent, far-reaching and effective plans for human betterment. It helps to give teachers a better understanding of, and a keener sympathy with their pupils and to establish better methods of teaching and courses of study."

Concluding Remarks

There does not appear to be in the United States, among those who are attempting health inspection of schools in some form or other, an adequate general conception of the problems involved. In many places health inspection means detection and elimination of contagious diseases; in other places it includes a hasty glance at each pupil to find serious defects; in still other places there is a vague idea of some connection between physical soundness and hygienic environment on the one hand, and school progress and moral soundness on the other. In a few places a broad foundation is being laid and the problems are being attacked in the light of a large perspective. One reason for this chaotic condition is that our exact knowledge of the processes of physical and mental development in the child is still rather meagre and inaccessible, and another reason is that as teachers and physicians we have not taken the pains to acquaint ourselves with known facts.

The idea involved in health inspection is broader than the elimination of contagious diseases; it is broader than the examination of children for physical defects and the remedial processes involved; it is an epoch-making idea. It means that the best education, the highest efficiency, the loftiest morals, the greatest happiness are inseparable from health. It has been said that we have paid too much attention in the schools to psychology and method, we have been too much concerned to impart knowledge and to train for efficiency, and we have paid too little attention to health and to the individual child. The latter part of this statement is true, but the former is false. No one has been too enthusiastic in lifting the race to higher levels, but we are becoming conscious of the fact that we have not been doing our work in the light of the proper perspective. Genetic psychology, experimental pedagogy, scientific investigation of the physical development of the individual, of the nature of fatigue and its relation to the periods of work, of the cause of disease and its prevention: these studies, while still in their initial stages of development, are giving us some idea of the future possibilities of the race, and health inspection is merely an attempt to adjust our educational activities in the light of present knowledge and in the direction of those possibilities which we as yet see but indistinctly.

We need to take a broader view of education. We need to include in it, not only school activities and influences directly, but the entire environment of the child from birth. The problem of health, then, becomes merged in the larger problem of education. The problems of education are complex, and must be solved by actual contact and repeated re-adjustments as more light dawns; but while we are facing these problems practically, patiently and persistently, the lack of vision is painfully apparent in much of our educational work, and health inspection is no exception.

Our departments of education in colleges and universities; our training schools for teachers; our medical and dental schools; our training schools for nurses; our churches; our training schools for social workers, all have responsibilities and opportunities here which should challenge them to the most serious endeavor. Each must contribute its quota to the solution of the problem of hygienic living in the broadest sense.

BIBLIOGRAPHY

1. ALLPORT, FRANK. A Plea for the Systematic Annual and Universal Examination of School Children's Eyes and Ears. *Psyc. Clinic*, Vol. III, No. 3, May 15, 1909.
2. AYRES, LEONARD P. The Effect of Physical Defects on School Progress. *Psyc. Clinic*, Vol. III, No. 3, May 15, 1909. pp. 71-77.
3. BURNHAM, W. H. The Need of More Attention to Health in the Public Schools. *Proceedings of the 46th Annual Convention of the University of the State of New York. Bulletin*, No. 443, March 15, 1909. pp. 23-35.
4. —— ——. "Bibliography of School Hygiene." *Transactions Nat. Ed. Asso.*, 1898. pp. 506-523.
5. BAKER, S. JOSEPHINE. The Division of Child Hygiene of the Department of Health of New York City. Reprint from *Woman's Medical Journal*, April, 1910. p. 15.
6. CRONIN, JOHN J. Report of Committee on Status of Medical Inspection of School Children throughout the United States. *Proceedings of the Fourth Congress of the American School Hygiene Association*. Indianapolis, Mch. 2, 3, and 4, 1910. pp. 176-183.
7. CARUTHERS, D. A. The Medical Examination of the School Child. London, 1910. p. 91.
8. CORNELL, WALTER S. Mentally Defective Children in Public Schools. *Psyc. Clinic*, May 15, 1908. pp. 75-86.
9. —— ——. The Need of Improved Records of the Physical Condition of School Children. *Psyc. Clinic*, Vol. III, No. 6, November 15, 1909. pp. 161-163.
10. —— ——. The Physical Condition of the School Children of the School of Observation, University of Penn., *Psyc. Clinic*, Vol. III, No. 5, Oct. 15, 1909. pp. 134-135.
11. —— ——. The Nurse as a Municipal Officer. *Psyc. Clinic*, Vol. IV, No. 1, Dec. 15, 1910. pp. 181-188.

12. Cornell, Walter H. The Nervous Disorders of School Children. *Psyc. Clinic*, Vol. IV, No. 3, May 15, 1910. pp. 65-78.

13. Crawley, Ralph H. The Hygiene of School Life. London, 1910. 403 p.

14. Connecticut School Document No. 10. Laws relating to Schools. 1910.

15. Gulick and Ayres. Medical Inspection of Schools. New York, 1908. 276 p.

16. Heeter S. L. Medical Inspection in the St. Paul Schools. *Psyc. Clinic*, Vol. III, No. 3, May 15, 1909. pp. 61-66.

17. ——. Conservation of Health in the School Room. *Psyc. Clinic*, Vol. III, No. 5, Oct. 15, 1909. pp. 121-124.

18. Harrington, Thomas F. Health and Education. Reprint from the *American Physical Education Review*, June, 1910.

19. ——. Report on Department of School Hygiene. Reprint from Superintendent of School's Report. 1908. 81 p.

20. Hogarth, A. H. Medical Inspection of Schools. London, 1909. 360 p.

21. Holmes, Arthur. Can Impacted Teeth Cause Moral Delinquency? *Psyc. Clinic*, Vol. IV, No. 1, March 15, 1910. pp. 19-22.

22. Kelynack, T. N. Medical Examination of Schools and Scholars. London, 1910. 421 p.

23. Kirk, Edward C. The Dental Disabilities of School Children, *Psyc. Clinic*, Vol. III, No. 8, Jan. 15, 1910. pp. 217-223.

24. Leslie, Geo. L. Health and Development Supervision of the Public Schools of California. *Psyc. Clinic*, Vol. IV, No. 2, April 15, 1910. pp. 33-39.

25. ——. A Department of Health and Development for the Public Schools. MS. Unpublished.

26. Martin, George S. A Lesson from Medical Inspection of Schools. *Psyc. Clinic*, Vol. III, No. 1, March 15, 1909. pp. 9-13.

27. ——. School Hygiene in Massachusetts. Reprint from the Seventy-second Report of the Massachusetts Board of Education. 27 p.

28. ——. Medical Inspection in the Public Schools of Massachusetts. Reprint from the Seventy-fourth Report of the Massachusetts Board of Education. 30 p.

30. Schlegel, George S. The Reading Free Dental Dispensary. *Psyc. Clinic*, Vol. III, No. 9, Feb. 15, 1910. pp. 249-254.

31. Sneed, C. M. and Whipple, Guy Montrose. An Examination of the Eyes, Ears and Throats of Children in the Public Schools of Jefferson County, Missouri. *Psyc. Clinic*, Vol. II, No. 8, Jan. 15, 1909. pp. 234-238.

32. Standish, Dr. Miles. Should the Examination of School Children be conducted by the Teacher or School Physician? *American Physical Education Review*, Vol. XVI, No. 4.

33. Taussig, Albert E. The Prevalence of Visual and Aural Defects among the Public School Children of St. Louis County, Mo. *Psyc. Clinic*, Vol. III, No. 6, Nov. 15, 1909. pp. 149-160.

34. Upsom, Henry S. Moral Aberration due to Physical Irritants. *Psyc. Clinic*, Vol. IV, No. 6, Nov. 15, 1910. pp. 149-154.

35. Wallin, J. E. Wallace. Medical and Dental Inspection in the Cleveland Schools. *Psyc. Clinic*, Vol. IV, No. 4, June 15, 1910. pp. 93-108.

See also the School Laws of the different states mentioned, the annual reports of the public schools in the different cities, and various articles in the following periodicals:

The Psychological Clinic (Philadelphia), *School Hygiene* (London), and the *Zeitschrif für Schulegesundheitspflege* (Hamburg).

APPENDIX

SCHOOL MEDICAL INSPECTION IN NEW YORK CITY

School Medical Inspection was initiated in New York City in 1897 by the appointment of fifty medical inspectors at a salary of $30.00 per month. Each inspector was assigned to a number of schools which he visited each morning and examined pupils referred to him by the teachers as suspected cases of contagious disease.

In September, 1902, the system was extended so as to include also routine weekly inspection of children in the class rooms, and the visiting of absentees at their homes. The salary of the inspector was increased to $100 per month. December 1st, 1902, a corps of trained nurses was appointed at a salary of $75.00 per month. Thus far the work was altogether directed towards the elimination of contagious disease.

March 27th, 1905, marked the inception of a complete physical examination for each child in the public schools below the high school.

The next important advance in the development of medical inspection in New York City came on Aug. 19th, 1908, when the Board of Health created the Division of Child Hygiene as an integral part of the Department of Health.

ORGANIZATION AND ACTIVITIES OF THE DIVISION

The staff of the Division of Child Hygiene includes at present one hundred sixty-one medical inspectors and one hundred forty-two nurses and they are organized as follows:

A chief of the Division, who has the administrative control of the work throughout the city, receiving a salary of $3,000.00.

There are five Borough chiefs at an annual salary of from $1,500 to $2,000. The Borough chief is in charge of the work in a Borough and is directly responsible to the chief of the Dvision. There are eleven supervising inspectors at an annual salary of $1,500. They are under the direction of the Borough chief and in charge of a squad of from 10 to 15 inspectors; each inspector receiving an annual salary of $1,200.

The superintendent of nurses receives an annual salary of $1,200. She is in charge of the work of the nurses throughout the city and is directly responsible to the chief of the Division. There are seven supervising nurses and a corps of active nurses.

The activities of the Division of Child Hygiene include more than the medical inspection of school children. The plan includes "a comprehensive supervision of the health of the child from birth to puberty in so far as a municipal health department" can "control the conditions of child life."[1]

The most important activities are:

1. The control and supervision of midwives.
2. Instruction of mothers in the care of babies.
3. Supervision of foundling babies boarding out in homes.
4. Inspection and sanitary supervision of day nurseries.
5. Inspection of Institutions harboring dependent children.
6. Medical inspection and examination of school children.
7. Enforcement of that part of the child labor law which relates to the issuing of employment certificates.[1]

MORNING INSPECTION

In all the earlier systems of school medical inspection the sole object was to detect and exclude cases of contagious disease. Morning inspection was the first method of inspection and it is still retained as a part of the system in New York City.

Each inspector visits each one of his schools every morning before 10 o'clock and examines in a room set apart for that purpose.

1. All children referred by the teacher as cases of suspected contagious diseases.
2. Children who have been absent from school for several days.
3. All children returning after previous exclusion.
4. All children referred for diagnosis by the nurse.

For convenience contagious diseases are designated in two grades—major contagious diseases, including small pox, diphtheria, scarlet fever, measles, chicken pox, whooping cough, mumps, and pulmonary tuberculosis in active stage; and minor contagious diseases including acute conjunctivitis, trachoma, skin diseases, pediculosis, etc.

Cases of major contagious diseases are at once excluded. The inspector immediately telephones the name and address to the Borough Office of the Division of Contagious Diseases. He duplicates this by a notice through the mail and again includes the case in his daily report. The Division of Contagious Diseases at once sends a diagnostician, except in case of diphtheria or pulmonary tuberculosis, in order to confirm the diagnosis. If the diagnosis is confirmed the case remains under the control of the Division of Contagious Diseases; if not confirmed, the Division of Contagious Diseases issues a certificate allowing the child to return to school at once.

---

[1] The Division of Child Hygiene of the Department of Health, N. Y. City.—S. Josephine Baker, M. D.

In case of diphtheria the inspector takes a culture and the diagnosis depends upon the outcome of the culture. Cases of tuberculosis are referred for treatment to the family physician, or to the Department of Health clinic and a special report is made to the chief of the Division of Child Hygiene.

Children affected with contagious eye and skin diseases whose parents have persistently refused to obtain treatment are excluded, and cases of pediculosis with live pediculi may be excluded. Minor contagious diseases under treatment are as a rule retained in school excepting very severe cases of scabies and trachoma.

Routine Inspection for Contagious Diseases

This was the second development in the system of medical inspection in New York City and it is still retained. A few weeks after school opens in the fall, giving a little time for adjustment of school activities, and for all pupils to become enrolled, a general routine inspection of all children is made by the medical inspector. The inspector takes his position in some convenient, well lighted corner of the class room. All pupils form in line and filt past him for inspection. In passing the pupil exposes to view the palms of his hands and his wrists, pulls down the eyelids exposing the conjunctiva, opens the mouth, and the girls life up the back hair: wooden tongue depressors are furnished by the department and a separate one is used for each child. This routine is made by the inspector at the beginning of each term, and is repeated by the nurse at least once a month throughout the year.

Contagious diseases are designated according to a certain code as follows:

1. Diphtheria
2. Pediculosis
3. Tonsilitis
4. Pediculosis
5. Acute Conjunctivitis
6. Pediculosis
7. Trachoma
8. Pediculosis
9. Scarlet Fever
10. Measles
11. Varicella
12. Pertussis
13. Mumps
14. Scabies
15. Ringworm
16. Impetigo
17. Favus
18. Malluscum Contagiosum
19. Acute Coryza

When the physician diagnoses a case he calls out the code number, the teacher puts down the name of the child with the code number. This was done originally to keep the children in ignorance with regard to the disease indicated but they are now quite familiar with the code so that at present it serves merely as a convenient method of making records.

Children who are found with symptoms of a major contagious disease are given an exclusion card and the Department of Contagious Diseases is notified as indicated before.

Cases of acute conjunctivitis and of skin diseases are referred to the family physician; or, if no family physician can be obtained, to dispensaries or to the school nurse for treatment. Trachoma is referred to the family physician or to one of the clinics of the Board of Health. Children returning after small pox, scarlet fever, diphtheria, measles and chicken pox must present a certificate from the Division of Contagious Diseases, and this certificate must be seen by the inspector before the child can be re-admitted. In case of mumps and whooping cough he may be admitted at the discretion of the medical inspector.

PHYSICALS

There are three classes of physical examinations. 1. Routine Physicals. 2. Work Paper Physicals. 3. Physicals for athletics.

Each morning as soon as the inspector has made his tour of morning inspections, he stops at one of his schools and proceeds to make regular physical examinations. These examinations cover the following points: Defective vision, defective hearing, defective nasal breathing, hypertrophied tonsils, tuberculous lymphnodes, pulmonary disease, cardiac disease, chorea, orthopædic defects, malnutrition, defective teeth, defective palate. A measurement of height is also made.

The examinations are made in the following order: First those children entering school for the first time. Second, beginning with children of the lower grades and proceeding to the higher grades in regular order.

When the pupil comes for his physical examination he brings with him his school record card, one side of which contains his school record, the other side contains his physical record. A duplicate of this record is made, one is kept by the nurse, the other goes back to the teacher. In case of a defect a record is also made out by the inspector which is sent to headquarters, a duplicate record is made for the nurse upon which she records the progress of the case and when it is terminated she sends the record to headquarters. Each defective child is also given a parent's notification card.

Work paper physical examinations are always made when called for, and they cover practically the same ground as the regular physicals. When defects are found which are likely to interfere with a child's health and efficiency his papers are withheld and he is told to return when the defect has been remedied.

Physical examinations for athletics are made upon demand. The most important consideration here is the examination of heart and lungs. When a case shows marked defectiveness a complete physical examination is made. If no defects are found the pupil is passed and no record is kept save the official record of the Department of Physical Culture.

THE MEDICAL INSPECTOR

Besides the activities of the medical inspector already indicated, he visits at their homes all children excluded by the nurse or principal as cases of suspicious contagious disease. He obtains each day from the clerks of the schools a list of all pupils who have been absent for three or more days, and when there is any suspicion of contagion, he visits these at their homes and he reports to the Chief of the Division the names and addresses of all cases of contagious disease found. Whenever the nurse reports her inability to move the parent to action in case of non-contagious physical defects, the inspector must visit the case and instruct the family as to the necessity of treatment. He visits all cases of still birth reported by midwives, and inspects the equipment and surroundings of all midwives in his district at least once a month. He also inspects day nurseries and institutions harboring dependent children. He gives lectures and instructions to mothers at the educational centres and certain inspectors are detailed to visit the recreation piers, treat sick children and instruct mothers. He also gives lectures to Little Mothers' Leagues and he treats cases of summer complaint reported by the nurses. These latter activities are carried on during the summer months when the inspector is free from the regular routine of school inspection.

THE SCHOOL NURSE

The school nurse is a comparatively recent addition in medical inspection. She took her present place in New York City when the Division of School Hygiene was established in 1908. She was a success from the very beginning and her reputation is ever increasing. Before the nurse came a notice of defects found was sent out by the inspector to the parent with the advice that a family physician should be consulted. Under this régime about 6% of the children were treated. During 1909, with the present staff of nurses, 87% of those who were found defective received treatment.

The nurses in New York City are required to have passed a civil service examination. They are assigned to a group of schools having from 4,000 to 6,000 pupils.

The nurse visits each school each day. She meets each morning all children referred to her by the inspector for instruction or treatment. She refers to the report of the inspector left for her and treats each case accordingly. The treatments she is allowed to give are prescribed in the rules and regulations of the Division of Child Hygiene. When cases of minor contagious diseases are referred to her she is responsible for them until terminated.

Children affected with pediculosis are assembled in groups and instructed as to the methods of home treatment. They each receive a circular of "Instructions to Parents on the Care of Children's Hair and Scalp" and are instructed to report to the nurse at least once a week.

Children affected with trachoma are never treated by the nurse, but they are instructed by her as to the necessity of treatment. If a family physician cannot be secured they are referred to the Eye Hospital and Dispensaries of the Department of Health. If parents neglect to procure treatment the nurse visits the home and explains the need of medical care. If she does not succeed she refers the case back to the inspector. The nurse treats cases of communicable eye and skin diseases.

At least once a month the nurse makes a routine inspection for contagious diseases. She proceeds exactly in the same manner as does the inspector in his routine examination at the beginning of each term. Whenever she finds a case with symptoms of contagious disease she refers the case to the principal for exclusion and at once notifies the Division of Child Hygiene, whereupon an inspector is sent to diagnose the case. All other cases are referred to the inspector on the following morning for diagnosis. The nurse makes no diagnosis whatever.

Each day the inspector hands the nurse a complete physical record of each child examined by him on that day. The nurse fills out for each defective child a notice to the parent asking that the parent report to the nurse for instruction. This notice is signed by the inspector and handed over to the principal who mails it to the parent. If the parent does not report within three days, the nurse follows the case to the home, and right here, perhaps, is the point of greatest efficiency in the system, a fact which I will try to make more apparent later on in the report.

REMEDIAL AGENCIES

All cases are in the first instance referred to the family physician and where it is evident that parents can afford to pay for treatment this is insisted upon, but in many of the cases that have to be followed to their homes by the nurse this cannot be done. The nurse is supposed to be perfectly familiar with remedial agencies in her district and she refers each case to an appropriate agency, very frequently herself accompanying the child, but in each case she must first get the written consent of the parent.

The Department of Health maintains one hospital and two dispensaries for the treatment of trachoma and all cases of trachoma not treated by a physician are referred to one of these institutions. Each child treated is given a card which is stamped each time treatment is given so that the nurse may follow up the case and know when treatment is regular.

The Department of Health also maintains several tuberculosis clinics. Besides these clinics there are many other institutions which emphasize this work. At present there is an association of tuberculosis clinics whose purpose is the control and treatment of tuberculosis in the boroughs of Manhattan and the Bronx. These boroughs are divided into 18 districts to each of which a clinic is assigned. In a number of these clinics medicines and treatment are furnished free; in others there is a small fee which is remitted for such cases as are too poor to pay. There are nurses connected with each of these clinics who follow the patients to their homes, give instructions and see that the conditions at their homes are made as favorable as possible both for the recovery of the patient and also for the protection of other members of the family.

A very interesting feature of this work is the establishment of ferry boat day camps for those who are not able to go out of the city. There are three "ferry boat" day camps: The Middleton, maintained by the Department of Health, anchored at the foot of East 91st Street. The Southfield, maintained by Bellevue Hospital, anchored at the foot of East 26th Street. The Westfield, maintained by Gouveneur Hospital, anchored at the foot of Jackson Street. The Red Cross conducts a day camp on the roof of Vanderbilt clinic. These day camps are open from 9 A. M. to 5 P. M. The patients are given hot mid-day meals and two luncheons consisting of eggs with bread and butter.

These camps interested me especially because they maintain open air schools for children excluded from school on account of tuberculosis. I was told by good authority that these open air schools were quite sufficient to accommodate all children excluded from the public schools on account of consumption. The Department of Education furnishes a teacher and frequently the teacher is herself a consumptive who may be benefited by the treatment.

The Division of Child Hygiene has made arrangements with various charitable institutions whereby they furnish glasses for those who find it absolutely impossible to procure them in any other way—it is the policy of the Division now to furnish anything unless in extreme cases. In some schools a fund has been established for this purpose. Teachers sometimes furnish the money with the understanding that it is to be returned in small installments. One of the leading opticians in New York City is furnishing glasses to school children at cost, making the price from one dollar to one dollar and a half per pair.

For ear, nose and throat troubles children are referred to the various hospitals and clinics in the city. The clinics of the medical schools are quite prominent in this work.

The greatest problem in remediable work is that of dental treatment. There is one free dental clinic for children maintained by private charity. The Vanderbilt clinic and Bellevue Hospital clinic furnish treatment at nominal cost, but these agencies are able to take care of not more than 1% of all children needing treatment and being too poor to pay for the same.

Some Problems the Division of Hygiene is Trying to Solve

In the first place the system lacks economy. At present the physician makes all diagnoses. The nurse acts only under his directions. She makes the routine examinations for contagious diseases but notes only symptoms and refers all cases to the physician for diagnosis. If she finds a case where she suspects a major contagious disease and the inspector does not happen to be present, which is nearly always the case, the pupil is excluded, the division is notified and an inspector is sent to make a diagnosis. If he finds a contagious disease he notifies the Division of Contagious Diseases who send a diagnostician to take charge of the case. Here are three persons involved in finding one case.

The Division is at present making an experiment with a view to giving the nurse greater responsibility and of relieving the inspector entirely of all contagious cases. That would mean that all morning inspection and all routine inspection for contagious diseases would be made by the nurse and she would take the responsibility for exclusion. The inspector would simply examine for physical defects. This would call for double the number of nurses while the number of medical inspectors would not need to be increased in order to make the system much more efficient than it now is.

With this in view Dr. Baker has put two schools, consisting of about 4,000 pupils, in charge of one medical inspector and two nurses as an experiment.

The new plan would involve a system of instruction and training for nurses beyond their regular training. If the responsibility of the nurse is to be greater her training must be correspondingly greater and must become more or less specialized; this training, however, can be secured for the most part while the nurse is in active service. Dr. Baker is at present giving a course of lectures in Columbia University on Public Health Nursing and she expects to make this part of the work a prominent feature in the new plan.

Another difficulty standing in the way of the best results is the attitude which the average inspector takes towards his work. The medical inspector in New York City gives only a part of his time to medical inspection. He has a private practice which in most cases brings him a larger income than the salary he receives as an inspector; besides this the income from his private practice depends upon the energy which he puts into it while his income as an inspector is fixed. The result of this is that in some cases his work is mechanical and he does not always use the same good judgment and common sense in his school examinations as he does in his private practice.

The theoretical remedy for this is to make medical inspection a profession—to have from 20 to 30 medical inspectors who give their entire time to the work and receive an adequate graded salary ranging from $2,500 to $4,000. This would put life into the work. It would open up a very attractive career, similar to that of Bacteriologist. It would leave a man loose to seek even better opportunities in other places if he made good, and it would mean real efficient work.

GENERAL RESULTS

The statistics produced to show the results of medical inspection are extremely misleading. Concrete evidence and individual cases are plentiful showing the beneficial results of the work but no set of statistics, no matter how accurate they may be, can ever give an adequate account of it. Besides this, there is in New York City an absolute lack of standard in statistics. This has partly grown out of the system of supervision. The medical inspectors are directly responsible to a supervisor who visits each school under his supervision about once a week, re-examines some of the children already examined by the inspector. If the inspector fails to notice and record the slightest degree of tonsilar tissue he is likely to be reprimanded by the supervisor. As a result the statistics show too large a per cent of defects. This tends to discredit the work with parents, for too frequently the parent is urged to have physical defects corrected only to find upon consulting a specialist that it was a false alarm.

Dr. Baker defines a physical defect as one which gives noticeable symptoms. If a child is perfectly healthy and is found to have a little tonsilar tissue he is not defective. The child who is absolutely free from tonsilar and adenoid tissue is the exceptional child.

But even though this definition were accepted as a basis in practice by all inspectors there would still be a considerable personal variation, and if we add to this the variation in the degrees of defectiveness we shall see that it is impossible to get the exact bearing of physical defects on school progress. The results found by Dr. Ayres do not carry us far beyond what we already knew, namely, that there is a more or less constant relation between physical defects and school progress.

The most apparent results of medical inspection are shown in the case of minor contagious diseases. During the first half of the year 1909, 329,848 cases of eye and skin diseases were found, and during the second half of the same year only 121,667 cases were found, a decrease of over 60%. Besides his the cases found now are of a very mild type.

Similar results are shown with regard to pediculosis, and all concerned say that the personal appearance of the children, especially in congested districts, has improved remarkably. These results are accomplished largely through the home work of the nurse. If children were merely treated for contagious troubles at school and returned home only to be re-infected, not much would be accomplished; but the nurse on her visits to the home tactfully maneuvers by instruction and demonstration and by keeping everlastingly at it until the home is cleaned up. This gets at the root of the matter. The nurse also accomplishes a great deal in cases of bad nutrition by instructing the mothers as to the proper diet and the methods of preparation and storing of food.

During the year 1909 about 74% of the children examined were found to have one or more physical defects, and 87% of this number received some treatment, although much of the treatment was inadequate. Possibly about 50% received adequate treatment.

Something has been accomplished also in Dental Hygiene. A circular is published by the Division giving directions with regard to the care of teeth. In some cases children bring their tooth brushes and tooth powder to school and the nurse shows them how to proceed. Some of the teachers have also taken up this work and have regular "tooth brush drills."

Another matter which has been very much improved through the present system of medical inspection is the matter of attendance.

The Work of the Division of Child Hygiene During Summer Months

The energies of the Division during the summer months are principally directed to the reduction of infant mortality.

In 1909 a conference was called by the Department of Health to which were invited all the agencies having to do with child welfare. Sixty agencies responded. The object of the conference was to organize these agencies so as to make the work as economical and efficient as possible. The literature in the form of circulars to be distributed was decided upon and the Department of Health undertook to furnish this for all the agencies. The city was divided into districts, each in charge of a nurse of the Division, for the purpose of purely educational work. This nurse made herself perfectly familiar with all the allied agencies in her district and referred cases to them according to their needs.

Educational centres and clinics were established throughout the city to the number of 54. Each clinic was in charge of a nurse and an inspector who gave demonstrations and personal instruction and advice in the proper care of babies.

The nurse in each district visited each baby in her district whose birth was reported by a midwife and also canvassed the tenement houses for babies under two years of age for the purpose of giving instruction in the proper feeding, clothing, bathing, and airing of the babies. Demonstrations were given where necessary, posters and pamphlets distributed. All sick babies found who were not under the care of a private physician were reported to the Department and an inspector was sent to care for them. Where necessary the nurse assisted in the care of the baby. The result of all this work was that the rate of infant mortality during the year was the lowest in the history of the city.

Another very interesting feature of this work is the "Little Mothers' League." Girls in the public schools over twelve years of age are organized under the direction of the Division of Child Hygiene. They hold regular meetings and receive instruction weekly from the nurses and inspectors in the details of baby care. Instruction is given in proper infant feeding, care and preparation of milk, bathing, clothing, airing, and general hygiene. After attending for six weeks the members receive a badge. Each member also receives a certificate. During the summer of 1910 there were 71 leagues having a membership of 22,510.

The work for the coming summer will be somewhat modified.

An appropriation of $40,000 has been made for the purpose of establishing milk stations. Heretofore five milk depots and diet kitchens have been maintained by charitable institutions. Physicians were detailed by the Division to these depots, but for the coming summer the Division will maintain 15 stations of its own: 5 in Manhattan, 9 in Brooklyn, and 1 in the Bronx. Plain milk will be sold here, but the principal object of these stations is educational. A nurse and an assistant will be on duty daily from 8 to 12. A physician will be on duty twice a week from 9 to 12. Lectures, demonstrations, personal consultation and advice will be given.

The Division finds that the corps of nurses is quite insufficient to cover all the city and to properly care for the babies during the summer, so a demonstrational experiment will be made during the coming summer in the hope of securing thereby a larger force of nurses.

Only the congested districts will be canvassed. A nurse starts out in her district, finds 100 babies who need her attention and gives her entire time to this hundred. As soon as one case is dismissed another is taken on, but the number under her care is never to exceed one hundred.

THE OBSTINATE CHILD[1]

By Ellen Clune Buttenwieser, Ph. D.

Judge Ben. B. Lindsey, whose success with delinquent boys and girls has opened the eyes of the world to the rights and the wrongs and the divine possibilities of children, has stated in his introduction to Dr. Merrill's book, "Winning the Boy," a fundamental pedagogical principle which it would be well for us mothers and teachers to bear in mind as our guiding principle when dealing with our own children or pupils. He says:

"Every worker for childhood, whether the father in the home, the teacher in the school, the probation officer or the judge of the juvenile court—all are agreed that formation is the thing that we most need in dealing with the human character, and formation comes from within through the human heart and not from without through iron bars or any other methods of force and violence, whether nagging and fault-finding in the home or detention behind stone walls."

Formation comes from within, through the human heart, and not from without. Therefore Judge Lindsay says: "When you seek to win a boy go after his heart."

This principle that to reform a child, to win a child to right conduct, you must get at his heart and start there a right feeling and an impulse to right-doing is the principle that I have tried to bring out in this paper on the Obstinate Child. It would be the same were it the Untruthful Child, the Selfish Child or any other kind of imperfect child. It is what I mean when I say "the idea is not to fight the bad at all but to foster the good."

As to the obstinate child I believe that, primarily, there is no such thing as an obstinate child. It seems to me obstinacy may be compared with tuberculosis, which, physicians nowadays assure us, is not hereditary. They tell us that at most the child may be born with a tendency to the disease, that under favorable conditions this tendency becomes lessened, even altogether outgrown, but that under unfavorable conditions it increases until finally the weakened organs fall a prey to the disease. Even so is it with obstinacy. The child may be born with a tendency to stubbornness, but whether this tendency develops or to what extent it develops depends on the determining influences and conditions of early life, the chief of these in the first few years being the mother or nurse.

---

[1] A paper read before various Mothers' Clubs of Cincinnati, Ohio.

The real question to be considered, therefore, is what attitude should be adopted by the mother toward the child in order to nullify any tendency to obstinacy that may exist. This question, it will be seen, involves the larger questions of growth and training, of obedience and punishments, of principles and methods, and to these I shall have to make constant reference in this paper.

As to the period of infancy, we mothers all know the feasibility and importance of cultivating good regular habits. Granted this is done, we may pass on with an easy conscience to the next period, in which the child steadily learns to accommodate himself to his environment. His will asserts itself. It becomes pitted against other wills, against other forces outside of himself. It is a painful sensation when the other forces are stronger than his will, but *so* he learns.

The importance of this period cannot be overestimated. It is the time for the most effective character building, and for this reason this period will engage our attention more than any other in the present study.

The child is led on gradually and unconsciously to self-control. Smooth and pleasant should be his path—there should be no conscious training, no conflicts, no scenes. Not force nor, on the other hand, coaxing, but simple maternal tact should be the mother's tool to bring about the results at which she aims, to bring them about without calling forth conscious opposition or any stubborn tendency in the child.

If some one says this *sounds* easy, I reply it is as easy as it sounds, provided one thing be kept in mind, that in these early years *the child's physical needs must come first.* With his physical needs satisfied, a healthy child should be an angel. See that the child is healthy and comfortable, that is, do not let him feel any discomfort from the need of food, sleep, rest. If he does, he is sure to be cross and hard to get along with. Above all, when a child is hungry, sleepy, sick or tired, *never train.* It is barbarous to try to put a sleepy, nervous child through a course of moral gymnastics; it is sure to have a pernicious effect on his character and will probably make him stubborn if he has any tendency that way.

Give him his food before he gets cross from the need of it, put him to bed before he is nervous and irritable from the need of sleep, take him in his happy frame of mind and let him take his midday rest so that his nerves will be placid for the remainder of the day. Remember that sleep is a habit and so are nerves.

But if you do not manage to anticipate these physical needs and so to ward off outbreaks which seem to be just fits of temper but which are in reality the natural revolt of his nervous system, at least do not make the child suffer for your mistake. I have actually seen little children punished for what their mother considered fits of temper, when, in all justice, the mother should have been punished for not having prevented the cross spells. Of course the mother has not consciously neglected the child, she simply has not understood his needs, but why be impatient with him on account of her own limitations?

I have a little fellow at home, two and a half years old—we think him a very tractable child, but I would not answer for the results if we attempted to exhibit his docility when he happened to be very hungry.

It is a generally acknowledged fact that even grown people are influenced by their physical condition. Hunger and fatigue are very apt to make us irritable and those around us are very likely to notice the fact that we are irritable, even though they do not know the explanatory circumstance. *We* are cross, *they* retort, the general peace is disturbed, all because we missed our sleep the night before or ate a poor breakfast. We have often heard that man is much more complacent and yielding after a good dinner. So is woman and above all so is the poor child.

Suppose one's husband came home some evening very hungry and weary, and then suppose he had to wait for dinner until he was still hungrier and decidedly cross, and suppose, when it was at last ready, one said to him, "Now John dear, dinner is ready and everything is very nice, but you really look a little out of harmony. Do brighten up before you go into the dining-room. Say something nice to the cook just to show you cherish no hard feeling toward her for having kept you waiting, and recite that little sonnet "The world is too much with us" before you sit down to the table. Having supposed this much, I think it will be easy to suppose that if John has any tendency to be profane, it will assert itself very forcibly. Take John after a satisfactory meal and he is pliability itself. Why should we expect of little two-year-old John the self-control that the John of forty years' experience of life does not seem to have acquired?

When the imperious physical needs of the child are crying for satisfaction it is worse than useless to command, to implore or to reason.

It is unfortunate that parents will not see this. In all those distressing little scenes which have a physical basis, the promises and threats parents so naturally resort to are alike a waste of breath. Impatience and severity at such times, and a stupid determination to conquer, show a lack of understanding in the parent hardly pardonable, and call out obstinacy and all forms of bad temper in the child. Only common sense and good temper, more specifically patience and self-control, in the adult will tide over the breach till the cause of the trouble can be removed and the occasion thus brought to a happy outcome. Of what avail is it to push one's authority for the moment, if in so doing one but defeats one's end, which surely is to make the child disposed to good?

Those worthy to have charge of children must know when they may insist on good conduct and when they must close their eyes to bad. Let them remember that the golden time for training, for making the desired impression, for starting the good habit is when the child is physically comfortable, when there are no warring elements in his little system.

If the child is cross and you cannot see the reason, at least be patient. If he cannot be hungry or sleepy, there is always a possibility of some other discomfort, an incipient cold or sickness or indisposition of some sort. We grown-ups have these attacks of disinclination and ennui to fight against. Well, we cannot expect the little ones always to overcome them unaided. A little patience and tact on our side and the child has soon forgotten that he wasn't happy, although his face may still be wet with tears.

Let us begin when the child's idea of the world around him is forming, when he is learning his own power and his limitations, the things he may do or have and the things he may not. Normally a baby wants everything he sees, and cries for everything he wants. He would like to handle it and put it in his mouth and find out its possibilities. That is the way he learns.

Now there are some things which a child cannot possibly be allowed to have or to do, as the case may be, under any circumstances. There is nothing for it in these cases but peremptory denial and the child soon learns to be reconciled to the inevitable. Even as when he touches something hot and is burned, he gets over desiring to grasp anything you tell him is hot, so he soon understands if you tell him a thing is *dangerous* or it is something *not for babies*. The trouble comes in when the parent gets inconsistent. Circumstances alter cases to the parent's mind, and what was allowed yesterday perhaps for some reason cannot be allowed to-day, or one parent denies something which the other is in the habit of allowing. The child naturally cannot understand this.

One day in a moment of desperation some one gives him a watch or a book or some other unsuitable thing to play with, to establish peace for the moment. Next day baby sees a watch or a book and naturally he wants it. The habit has been started. If he had never been allowed it, he might grasp the fact it was something he should not have, but he has been allowed it and it seems outrageous that he cannot have it now. In such cases, where reason is entirely on the side of the child, the only thing to do is to divert his mind by strategy from the point at issue. It is an easy thing to do; give him something else that he may have, take him somewhere, simply engage his attention. *Above all, do not have a prolonged contest.* This brings out the stubborn tendency. Do not dwell on the painful subject at all. Make him satisfied by all means, except of course by yielding up the bone of contention. He must forget that together with your seeming injustice.—Suppose this inconsistency happened to ourselves. We go to the library one day and are allowed to take out a book which perhaps is not usually let out. Next month we want the book again and are refused. We are up in arms at once. Why cannot we have it? We had it last time. We are going to see about this. If the attendant turns away our wrath with a soft answer, the matter ends amicably, but if her answer is not gentle, I very much fear that we feel pretty nearly as resentful and stubborn as the baby who has been the victim of our inconsistency.

Seeming inconsistency, of course, cannot be avoided. Things must be denied sometimes that are allowed at other times, but this should be done in such a way that the child does not become indignant and resentful. If the mother is not capricious and impatient the child very soon gets to understand that *she* has a reason for the refusal even though he cannot see it. And if she is reasonable and wise with him, he gets confidence in her and is satisfied when she says *no*. Submission to her will becomes a habit.

Even at this early age a child's individuality should be respected. Every baby has its own individuality. It manifests itself in a thousand little ways dear to the mother heart—in its little fancies and caprices. And why should a mother always force her preferences on the child? Why should she make him be satisfied with his teddy bear when he is going to bed, if he would rather have his sheep? And if two lead pencils afford him greater comfort than one, surely it should be a small matter to her.

I think mothers often are very obstinate about these little things and all the while think it is the child that is obstinate. Haven't you heard a mother say some time: "Now Lucy, come to bed, dear, put your nice new book away, and you 'll have it again in the morning?" And Lucy folds it tightly to her little heart: "O Mother, please let me take it to bed with me." And haven't you wished her mother would let her? But no, her mother must give Lucy a wholesome exercise in obedience. She makes a special point of it perhaps just because you happen to be present. What does Lucy do? That depends. Perhaps she goes off quietly to bed with a pathetic glance at the treasured book; perhaps she indulges in a crying spell, which her mother tells her is very naughty indeed; perhaps she follows some dim impulse inherited from her mother and kicks and screams for possession of the book and refuses to go to bed without it, entailing physical force and a great expenditure of nervous energy all round.

You never know what is going to appeal to the fancy of a child and give it pleasure. You may exhaust your imagination and your pocket book to find a lovely toy for your sister's baby, without eliciting any unusual sign of appreciation from the child, and you will watch with wonder his perverse delight over a worthless little pasteboard box that he rescues from the waste-basket, or a few empty spools tied to a string.

Only the other day my little boy spied a pair of his own wee stockings among a pile of things waiting to be ironed. He got them out with an extravagant demonstration of joy and clutched them to his breast as he was led off for his nap. He carried them about with him all the afternoon and took them to bed with him again that night. Next morning they had lost a good deal of their interest in his eyes and were ready for the wash again in mine. But they had furnished him with incalculable pleasure, and I cannot see that anything would have been gained had I sought to impose upon him my idea of the esthetic value and the real purpose of stockings.

Last winter, when he was ill (at the age of 20 months), and we racked our brains without much success to think of things that might take his fancy, there were two objects which rarely failed to stir up his interest. One was a little red box of shoe polish, which, fortunately, he spied before it had been opened, and the other was an oddly shaped bit of coal, reflecting prismatic colors, which one of the children had picked up in the street.

I am giving these illustrations because they prove to my mind two things, that children have their separate individualities which we should respect, not forcing ours upon them unnecessarily, and that children are very discerning. If their experience is that you grant them everything reasonably possible, that is, that there is no arbitrariness, no willfulness in your decisions, they submit readily to your judgment when you refuse. *A generous reasonableness on the part of the parent makes for a willing obedience on the part of the child.*

To use my own baby in illustration again: After his illness (an attack of grip prolonged by measles, running ears and intestinal complications) he was put on the strictest sort of diet for a long long time—no milk, no fruits, no sweets. He got to share the general feeling in the family that if he were to partake of certain things it would be disastrous, though of course he had no idea of the nature of the disaster. His feeling was probably all the more potent, because it was undefined. He often put things to his lips enquiringly, or brought them to me to another room to see if he might have them, but put them down at once when told impressively that that would be bad for the baby. The only trouble we had was when, thinking sometimes there was an improvement in his condition, we tried certain things and then had to eliminate them again from his diet. He did not understand the inconsistency. I have known him to play for hours on the floor with six or eight blocks of sugar without ever attempting to put them to his lips, although he knew that they were sugar and that sugar was sweet. He had the feeling that he must not eat them, for his little mind had grasped the fact that this prohibition was a necessity, not a whim.

When the little child understands that its mother is reasonable and just and when the mother understands the nature and the needs of her child, I cannot think that obstinacy is possible. I think it is always an error in judgment on the part of the mother or nurse that calls out the tendency in the first place. Too often children at this formative age are left to the care of incompetent, I mean mentally incompetent nurses, who have neither the love nor the judgment to guide them.

Then the child has to get accustomed to the world, to the world as we shape it for him, and sometimes we make it very difficult for him to do this. We confuse him by our lack of system and by our intolerance. If there is one thing, or if there are a few things in a room, which a child shall not touch, he will learn that and will be punctilious about it, but if every object is too good to be handled by little fingers, it is clearly a human impossibility to keep out of trouble. Children will scrape the furniture and soil our books and break our breakables if we do not provide another place and another outlet for their energy. They must have a place not too elegant for everyday play and clothes not too beautiful to be spoiled and things it won't hurt to play with. Some things they may have and some they may not have—they soon come to understand; but a reasonable amount of liberty and scope they must have or they will *not* understand. *If you are liberal in what you allow you may be strict about what you prohibit.*

I find that children very soon acquire an idea of possession, of individual ownership, what is theirs and what is sister's and what is father's, and my experience is that they are very reasonable about respecting the rights of others if their own rights are respected; but I think it takes children a good while to understand our system of valuation. To a child a cup is a cup. If he breaks one his feelings are the same whether it is a plain plebeian cup of unknown make or a highly prized specimen of Wedgwood or Crown Derby. That it was given to us by Mrs. X, who brought it to us from England, that all our friends admire it, that we could not possibly replace it, that we would rather lose almost anything than that precious cup, the child does not know, but how many a mother expresses this complication of her own feelings in her manner of dealing with the child for breaking the cup. This method relieves the mother's feelings for the time being, but it is bound to confuse and injure the child. It is better to prevent disaster by not putting temptation in his way. Finger-marks on an old magazine and on the book the fastidious Mrs. Y. has lent us arouse very different feelings in us, but they are just finger-marks to him in each case, that is, if he is conscious of the defacement at all.

The trouble is so many of our homes are not planned for children. Other considerations come first. The little ones are there on sufferance and are mostly in the way. Our *things* are endangered. We see the baby enter the room with dread and we wonder what mischief it will do next. That is n't the baby's fault. It is our fault for laying too great store by our *things* and taking too little heed of our baby's needs and rights.

I emphasize these *things* because I am coming now to another point on which I am going to appeal to the experience of every mother here. In nine cases out of ten when children are called naughty, are real principles at stake or simply minor considerations, our things probably? Are the children really naughty, or is it just an unfortunate though perfectly natural state of affairs in which they are involved to the detriment of our things or our feelings? How often are punishments administered because children are really guilty, and how often because their actions annoy or embarrass us, hurt our pride or try our patience?

The corrective and especially the educative value of punishment is greatly overestimated by many parents.—The baby spills the ink-bottle or hammers his toy-engine on the piano-stool if he gets a chance. Such things do happen even in well-regulated families. Your expression, your demeanor in general at the discovery will show him that is not allowed. Of course he will forget many times, but he does learn at last. The more patient you are, the sooner he learns. Whipping is barbaric. It will not prevent his forgetting, and, especially, if resorted to frequently it will prevent his drawing the proper conclusions. It is barbaric, I repeat, and altogether unnecessary.

But suppose it is a case of real naughtiness—if a child under three can be really naughty. Say the child is crossed and gets into a temper. The mother slaps it with the injunction to behave. Now the child promptly feels justified in its temper and, from whatever reason it cried at first, it now cries from its own hurt. It feels itself the injured one and the mother's lesson is lost. Perhaps it slaps back, kicks and struggles until overmastered by the stronger adult, who then (O Irony!) demands that the child say he is sorry, or that he wants to be good or that he will never do it again and so on. Naturally the child, whatever his age, is not in the mood to be sorry or to desire perfect goodness. Has the mother done anything to make him feel penitent?

If a boy in anger provokes another boy and the latter grabs him and throws him down and gives him a sound threshing, this latter boy may make the first say he has had enough before he lets him go, but he will not ask him to say he is sorry, or to say he will never do it again. He knows very well he is not sorry—he knows, moreover, that he will have to be on his guard, for if that boy ever gets a chance he is going to get even for that beating. Why cannot mothers be as sensible as these boys?

Of course, children may not resent parental chastisement as much as punishment from their equals, but they are *not sorry*. They should not, in all reason, be expected to be penitent after a beating. If a mother demands the child's promise to be good, after having stirred up all the evil in him, it is because she is stubborn and thinks of her own parental dignity and rights. Plenty of children profess sorrow promptly—fear, cowardice may make them do so, and very often the poor children have forgotten what it is all about long before the scene is over—they are spent and unhappy and glad to make peace with their mother, who, after all, is their great refuge in life. But the obstinate child, perhaps, cannot and will not say that he is sorry. Poor little mites, I have seen them whipped and locked in closets and humiliated in all sorts of ways, the while their mother believed she was overcoming their obstinacy. I do not know how it turns out in the end, whether the children say they are sorry or not, but I know they have long forgotten what their original crime was and a very bad habit has been started. Next time, the child behaves badly again, the mother whips (habit thus asserting itself in both), and the poor little mother says to her neighbor: "I don't know what to do with Willie, I don't see where he got his obstinacy.—He did n't get it from my side of the family I know."

What should Willie's mother do when he slaps at her in his temper? Certainly make Willie realize that he has done a very bad thing, make him feel sorry. It is futile to say, "I 'll show you, sir, whether you can slap at your mother or not." A mother certainly should be superior to her baby. A little patience and tact work wonders. Willie has a very loving little heart for all he has been so naughty and threatens to be so obstinate. And if he sees that he has hurt his mother, that she is the injured one and not himself, that he has made her feel bad (not mad), he is inclined to be very much sobered and rather shocked at himself. If she plays her rôle skilfully the chances are that Willie is very sorry and anxious to be reconciled.

Corporal punishment becomes a habit in parents. They do not realize to what an extent. The muscles of the arm are instinctively in exercise before they have been consciously directed by the will. And as the muscular prompting becomes a habit in the parent, so does the instinctive shrinking from the blow become a habit in the child. A mother who had abandoned corporal punishment with her two little girls told me the determining reason was that she had noticed them shrink frequently from her movements as if dodging a blow, even when there was no question of punishment or even displeasure.

Punishment is not only unjust but positively harmful if it stirs up either resentment and obstinacy, or fear and shrinking. This latter result, while not so trying to the parents as obstinacy, is even more harmful to the child's character.

I have known cases where corporal punishment was administered freely, yet the children felt no resentment, only grief; for the mother made them feel that she was acting from love. But in these cases corporal punishment is clearly unnecessary, for if their mother's love is so potent when accompanied by chastisement, it would be still more potent without. Now I know whereof I speak. I grieve to say that I punished my first two children when they were little. I thought it necessary for their good, and it became a habit to meet certain occurrences in a certain way. Two later children, one of whom is now seven, the other two and a half, I have never chastised. There has never been any necessity. There was n't with the others. These later ones have been obedient, anxious to please, grieved at their little misconducts; they are tractable and responsible for their age and have a very sensitive feeling in regard to right and wrong.

I think we parents are too exacting with our children. (Naturally, I have no reference in this paper to those blindly indulgent parents who spoil their children—they seem to me hopeless cases.) We expect them to be much more perfect and sweet-tempered and self-controlled than we ever shall be ourselves, even with our stronger wills, stronger motives and stronger reasoning power. We always see the room for improvement in them, and sometimes do not see the eager intention and loving good-will behind the poor effort. The people who get the best results from us are not those who are always fighting our faults, rather those who without straining or complaining call forth from us better things than we believed ourselves capable of. A child has a right to expect this generous attitude from his mother. *She* should be large enough to understand. If to err is human in the case of grown people, surely, surely, it is true of little children. It should not always be "I cannot love you Tommy when you are so selfish and naughty. Go and sit in a corner till you can be good." Sometimes to take Tommy silently on her lap in the rocking-chair with the little perverse head where he feels he has n't deserved it should be is enough to make Tommy fairly bristle with good intentions, and sometimes a hopeful reference to next time when he will be good is more efficacious than dwelling on the ignominious failure of the present. This is especially true of older children. If we were always dealt with strictly according to our deserts, I fear we would be paralyzed by discouragement half the time. There never was a greater truth put into two words than "Noblesse Oblige."

If it is important that a child should not be too rigidly censured even when it has been sadly at fault, it is of still greater importance that it should not be made to feel the mother's dissatisfaction when it has simply fallen short of her ideal. Elizabeth may have replied to Mrs. A's enquiries, not untruthfully, O no, on the contrary, with a distressing candor and veracity. Her mother winces when she thinks of Mrs. A's amusement and she reprimands the innocent Elizabeth for not having answered more astutely. Short-sighted mother, "thus blindly with her blessedness at strife," who does not see that when Elizabeth has acquired all this worldly wisdom, her little child will be gone!

Elizabeth's mother is like the rest of us. We are annoyed by our children's spontaneity, by their restlessness characteristic of all childhood, by a thousand little actions that are the natural result of their personality but that jar perhaps on ours. We find fault with their mistakes as with their willful faults, we show dissatisfaction because they have not spoken or acted just as our ideal would have done. We have the unfortunate idea that we have to mould their characters according to our ideas, instead of *giving them favorable conditions and then letting them grow according to the promise that is in them.* Burbank's idea is right; the child IS *the human plant.* If we do not see the promise we run the risk of blighting it.

When our children go up to the art-room with their laborious but grotesque little drawings, does the teacher criticise these strictly according to their artistic merits? Does she say, "Do you mean this for an engine and train of cars, Louise? It looks like a fence," or "Where is your palace of the King, Joseph? These few crooked little strokes?" No, the teacher sees the child's idea, she sees the promise and she fosters it till some day there is a worthy fulfillment. If she judged the children's efforts by her artistic ideal of a palace or a locomotive, their joy would be frozen, the promise smothered, and, instead of going up with eager enthusiasm to their half hour in art, they would accept it as a weary feature in the school routine.

I have pointed out that the child's environment on which so much depends is mainly the attitude of his parents and teachers, but often unfortunately his environment is very mixed, including aunts and uncles and cousins and other interested friends. A number of people all trying to train a child is confusing and usually disastrous. It is hard enough for a child to live up to his mother's ideal, but if he has to satisfy the ideal of a whole regiment of relatives, he is not to be envied. George Eliot has given us in Maggie Tulliver a good picture of a child who by nature was warm-hearted and inclined to good, but who had the bitter consciousness throughout her childhood that her mother and aunts thought her willful, obstinate and perverse, a discredit to the Dodsons, while her more commonplace cousin was the pride of the family.

There is nothing that hurts children so much, and I say this for teachers as well as for mothers, as a poor opinion of them, a lack of confidence in them. Even if they have forfeited your good opinion they must never feel that you think their case hopeless.

Encouragement, I do not mean flattery, but true discerning encouragement, has never hurt any one, while fault-finding and distrust have taken the heart out of countless millions, big and little. There is nothing like holding up to children an ideal of themselves. Unconsciously they imitate it. With very young children simple little stories are most efficacious; little A B C stories that may be manufactured at a moment's notice to fill the moment's need, with a moral so transparent and an application so direct that they may even tax the gravity of the narrator. Needless to say, no person of common sense will ever resort to a sensational or scare story to effect good conduct in a young child. If a stroke of the finger makes the necessary impression, it were unwise, to say the least, to use a sledge hammer. When the temptation to be untruthful, disobedient, or naughty in any specific way can be foreseen by the mother, a story just fitting the occasion in which the little hero or heroine, of course, does the right thing, will serve to steer the guileless child into the path of rectitude. Undoubtedly *it is better to work things so that the child will consciously choose the right than to impress him with his wickedness after he has chosen the wrong.* I repeat there is nothing like holding up to children an ideal of themselves. It is simply suggestion, but it is a pleasanter and a surer method of conquering children than by breaking their wills by conflict and force. I believe *the idea is not to fight the bad at all but to foster the good.*

In all this the teacher is at first somewhat handicapped. When the child comes under her influence some habits have become already fixed, and if his mother's attitude has not been wise, these habits may prove very trying to the teacher.

The teacher is further handicapped in that the child and his peculiar temperament are at first strange to her, and in that the first encounter, in fact usually every encounter, between her and the pupil is in the presence of the whole class. We all know a surer appeal can be made and a surer response obtained, if we have the boy or girl alone. The presence of others embarrasses and the obstinate child becomes still more hopelessly obstinate in the presence of onlookers. But a great deal depends on the teacher's personality, on her attitude, conscious or unconscious, to the child in question. It is a familiar fact that a pupil shows stubbornness toward one teacher and not toward another. In such a case should not the teacher ask herself if it is not somewhat her fault as well as the child's? Does she understand his temperament sufficiently, his needs? Does she not require too much? The teacher is a good deal like the mother. She expects so much of the children. She expects them to conform to a special ideal which she carries in her own mind. She does not always realize how much this demands of certain children, since what is easy for some may be hard for others, nor does she always realize how really severe certain trifling little punishments may be for some one child. The exception is always harder to deal with than the rule.

But whether the teacher has failed in her judgments or not, she should make it an unbending rule to avoid encounters with children that show an inclination to stubbornness, to shun issues which start the habit, as she would the plague. For once a child has shown obstinacy toward his teacher, it is of course, easier for him to show it a second time, and it is harder for her to meet it.

In truth, the wise teacher will know, obstinacy cannot be met. It must be anticipated, headed off A child that is simply willful and disobedient may be reasoned with or otherwise led to obey, but in the case of a really obstinate child, as I said before in another connection, it is useless to command, to implore or to reason. The only thing to do is to disarm him by strategy, to transform his conscious disinclination to do what you say into a subtle compulsion to do what you wish. If you have that rare combination of wisdom and patience necessary for this, the obstinate child will be as clay in your hands.

THE STUDY OF A CITY IN THE SCHOOLS OF THAT CITY

By John Cotton Dana

There are many plans for improving the government of cities; the best is that which simply asks that the city's citizens be educated. Referendum, initiative, recall, charter revision, commission government, new laws, civic leagues, reform movements and all the many other plans for making our cities more wisely and more honestly governed, and therefore cleaner, more healthful, more beautiful, and more desirable for business and more attractive as homes—these may help a little, temporarily, here and there; but genuine and permanent improvement can come only through improvement in the character and intelligence of the citizens. Golden conduct cannot come from leaden instincts, says the philosopher, and the wayfaring man sees that the philosopher is right.

The educational process is slow. A city's educational work can be as good as the people of the city wish it to be, and no better; and the people of a city can wish only for that kind of education and will demand only that kind and will tolerate only that kind which conforms to their own outlook, ability and prejudice. The stream cannot rise above its fountain; and the education of a city like the government of a city is just what the ability of its people entitles them to. The elders having but little wisdom can pass on but little to the next generation.

There are a few things, however, in which the elders can make their children wiser than themselves. On one of these things the public schools and the public library of Newark, N. J., have spent much time and energy in recent years. I refer to the study of their own city by the children of the city in the schools of the city. Newark is the first city in this country, so far as I know, in which this study has been taken taken up broadly and seriously, with a quite definite purpose and with quite elaborate and carefully designed apparatus.

The story of it is briefly as follows:

The library, about eight years ago, sought for literature interesting to young people on the history, population, government, industries and other features of Newark. Such material was needed to lend to young visitors to the children's room. Very little was found, and that little was scattered and fragmentary. All that was found was addressed to adults, not to young people. Finally the library decided to publish a little local material of its own. Mr. F. J. Urquhart, one of the editors of the Newark Sunday Call, was asked to write three short stories of Newark's origin and development and these the library issued in small pamphlets, one each winter, as they were prepared. They were lent to young people; were given or lent to teachers, single copies or in packages of 25, for use as readers; and were sold at 5 cents each.

In the three years during which these three pamphlets were being published, partly on account of their publication and use, partly on account of the continued promotion of the subject by the library, chiefly perhaps on account of that growth in civic pride which is now going on in most cities, interest in Newark study in the schools steadily increased. In the curriculum here and there were placed, for the most part at the suggestion of the library, instructions and suggestions to teachers about Newark geography, history, industries and institutions as topics for study, for essays and talks. School work upon these topics led many more children than before to come to the library for Newark information.

No city in the country seems to be equipped with such statements of its own life and varied activities as will interest or instruct its young people. Certainly Newark is not. Newark information in this line was sought for by the library in newspapers, books, city reports and other sources; was gathered, clipped, summarized, re-written, classified and made easily accessible. Short accounts were compiled of Streets, Parks, Trees, Water Supply, Sewage, Health Department, Fire Department, Police Department, Schools, Hospitals, and many other factors and aspects of the city's life. These "Newark Study" stories, usually between 500 and 1,200 words in length, were duplicated to the extent of hundreds of copies and were lent or given to teachers and children on request.

Pictures were gathered of noteworthy Newark citizens, of historic events and scenes, historic houses, public buildings, notable trees, parks, streets, and these with maps old and new and many other things were mounted on cards of uniform size, classified and arranged for easy examination. These pictures also were lent on request to teachers and pupils.

Each year on Newark Day, May 17, a modest exhibit of all kinds of print and pictures, etc., about Newark was installed in the library and was usually visited by several thousand children, often with their teachers.

This plan for making good citizens by giving the children a knowledge of their city and a consequent interest in it met with approval wherever and whenever it was discussed. It appealed especially to business men, as was shown by the action of the City's Board of Trade concerning it. That body not only heartily endorsed the work; but also paid for printing an extra thousand for free distribution of one of the history pamphlets.

About two years ago the Board of Education asked the author of the three little pamphlets, published by the library, on the Story of Newark, called respectively "Early Days," "Awakening" and "Progress," to revise them, cast them into one continuous narrative and publish them in one volume, with maps, illustrations and index. Mr. Urquhart did this, and the volume appeared in attractive form under the title, "A Short History of Newark." In accordance with an agreement entered into before publication the Board of Education purchased at once 2,500 copies of this book, and later 2,500 more, and placed it on its approved list. This meant that any teacher interested in the subject, either on her own motion or at the suggestion of her principal, who wished to use the book as a reader or as a supplement to her work in American history, could secure as many copies as she needed.

Not long after this the Board of Education called for a meeting in the public library of teachers, principals and citizens interested in promoting good citizenship. At this meeting, maps, charts, pictures, diagrams, etc., were shown on the walls, and leaflets, notes and books were distributed for examination, all suggesting ways and means of displaying teaching and using as a basis of talks, readings and essays, some of the more interesting and important facts about the city.

Soon after this meeting the Board of Education ordered made a hundred large maps of the city for school use. These are more than nine feet square, and are mounted on rollers. They show streets, parks, public buildings, railroads, trolley lines, ward boundaries and many other things all distinguished by appropriate marks and colors. They can be read easily across a school-room. I believe no city in the country has ever before caused to be made and put before its children an adequate map of the place in which they live. Maps of North America, Asia, Europe, the World, are common enough; and occasionally one finds in a school an antiquated map of one's own state. But a large, accurate, complete and interesting map of one's own city—this is something unknown in the equipment of a city's schools.

While these maps were being made,—and they were drawn and colored for the one purpose of making their town's area, form, character, etc., interesting and easily understood by the young—another small map was also designed. This is about twelve inches square, shows only a few of the streets, only one or two of the railroads and only a suggestion here and there of other details. It is in black only, is printed on thin writing paper, is issued in thousands of copies and is put up in pads of 100 for easy handling. This map is used for class work. The teacher asks her pupils, each having a copy of this skeleton map, to add to it such details as she may select to form any special lesson:—railroads, trolley lines, school houses, parks, hospitals, fire-houses, etc. They will thus furnish the basis for exercises in drawing, map making, geography and other studies, all with direct relation to the city of which they are to become citizens.

Meanwhile the superintendent of schools and his assistant were revising those parts of the course of study which could be most easily made to include references to the city, especially those having to do with Public Hygiene, Civics, History and Geography. Included in these are brief discussions of many subjects like tuberculosis, pure milk, a safe and sane fourth of July, water supply, sewage disposal and paving and care of streets, designed to suggest to the teachers the lines their work may take, topics which pupils may look up in the library and consider in brief compositions. They include also, and special emphasis is laid upon these, suggestions of things, which may be done by the pupils themselves in helping to take care of their own city, either individually or in organized groups, such as care of trees, protection of birds, and cleaning of the school yard. It is essential, of course, not only that the children know how a city may be made more beautiful and attractive, but also that they apply some of this knowledge to useful ends.

This "Newark and the City Arts" portion of the course of study of the schools is published complete in one volume. It is also issued in several parts, each containing so much of the course as has to do with a particular grade, that each teacher may have her Newark work all in one group.

In uniform style with the course of study are published about forty different leaflets of one to eight pages each. These are for the use of pupils as well as teachers. They are largely revisions of the multigraphed sheets already alluded to as having been compiled or copied and issued by the library several years ago. They now appear printed in attractive form.

They cover the following among many other subjects: Hospitals, Public Buildings, Streets, Industries, Water Supply, Free Public Library, Police Department, Public health, Regulation of explosives Ordinance, Street lighting Ordinances, Littering streets Ordinance, Shade Tree Ordinances.

These bear two series of page numbers, that for each leaflet and that for the entire series of which each forms a part. For teacher's desk use they will be bound in one volume; for use by the pupils as reading lessons or in studying special topics they appear singly and are printed in large quantities. They are written in plain and simple language, and of course do not include many details.

An index to the course of study and the leaflets and a guide to sources of information, compiled by the library, completes the printed material now in use. This was formed by taking from the course of study, from the leaflets and from the simpler books on Newark history, city life and public hygiene all words and phrases representing topics which can well be used by teachers as subjects of study, talk and discussion, as questions for debate and as subjects for inquiry at the library and for brief compositions. These words and phrases number more than 250. A few typical ones are: Defectives and dependents; Diphtheria and antitoxin, see Epidemics; Dispensaries; Education, cost of to State; Elections; Excise Commission; Expectoration; Explosives; Factories; Franchises; Garbage, Disposal of, see Waste.

After each of these topics, as it appears in the list, is given a list of references to sources of information thereon. These sources include the course of study itself, the subsidiary leaflets, the maps of the city, the reports of the city's many deparments and the books, pamphlets, charts, diagrams and pictures found in the public library.

Summarizing these helps to the study of Newark and the City Arts by the children of the city they are:

1. Formal courses of study with definite instructions as to work in the several grades in Newark History, Civil Government, Geography, and Public Hygiene.
2. An index to this course and to allied material.
3. References in this index to sources of information and suggestions on all Newark topics.
4. Leaflets descriptive of Newark's History, Population, Institutions, Laws and Customs, etc.
5. A Short History of Newark.
6. Books, Reports, Pamphlets, Clippings and Pictures relating to Newark in the Public Library.

In the past year this study of the city has been taken up in the high school. For this work tentative courses have been made adapted to pupils of high school age and such topics as the City Street and the Commission form of Government have been considered. Thus these courses will ultimately cover all of the four high school years and will supplement and carry on the work in the lower grades.

The very simple theory on which the work described has been laid out and carried on may be briefly summarized thus:

To the making of the good citizen go two fundamentals, intelligence and sympathy. The intelligence should be as broad and deep as each individual's capacity and opportunity permit him to make it. It may cover as many other subjects of every conceivable kind as the taste and circumstances of each individual may dictate; one subject it must cover if it is to be of service in making of its possessors a good citizen, and that subject is the citizen's own village, town or city, his own country and his own state. Confining the argument to city citizenship only, it is evident that that knowledge of his own city which forms one of the fundamentals of good citizenship includes in its objects much more than is included in the term civics or government. Indeed, knowledge of city government, while very desirable in a citizen, is a far less essential element in fashioning one into a good citizen than knowledge of the city's people, their intelligence, character and tendencies; its working conditions, of climate, topography, soil, and relation to other communities; its resources in stored wealth, in water power, lines of communications, houses, schools, factories, shops and public buildings; its improvements in water supply, sewage system, paving, parks and trees; its objects of interest and attraction, natural, artificial and historic; its self-supporting and elevating abilities acquired through the efficiency of its governmental and voluntary organizations, like fire departments, police departments, health departments, hospitals, churches, banks, libraries, museums, and all civic, social, charitable and benevolent institutions.

It seems needless to carry the enumeration further. It is evident enough that some acquaintance with these objects, movements and creations within one's own city is absolutely essential to one who would practice the art of citizenship wisely. Without such knowledge one cannot even cast his ballot intelligently once each year, and, what is of vastly more importance, cannot so conduct himself, hour by hour and day by day the whole year through, as to make his life helpful to his fellows.

I say this is evident enough, and I am sure most persons will agree with me, and I am also sure that most persons will be surprised to learn that not in any village, town or city of this country is this self-evident fact, about the fundamental importance in making good citizens of knowledge of one's own community, recognized in more than the slightest degree in the work of the public schools.

Of knowledge of alien things there is abundant mention and on the acquisition of that knowledge there is ceaseless insistence; but insistence on acquaintance with one's own community—such acquaintance as I have suggested with such facts as I have mentioned,—of this there is but the briefest mention and that only here and there.

Not only is it true that knowledge of facts about one's city is essential to good citizenship, it is also true that these facts furnish some of the best possible material on which to train the young.

History, geography, commercial geography, civil government, public hygiene, literature, composition, climate, geology, natural history and many other subjects may be made more valuable, more impressive, more easily understood and more attractive if concrete illustrations for them are found in one's own city.

Again it seems unnecessary to labor the point. At the schoolroom door are found the things which can and should illustrate the text-books on many subjects. It is said that thus to use one's own environment as a tool in formal discipline calls for two things, neither of which is at hand, to wit, elaborate text-books written to that environment and teachers able to use both book and environment; the answer is that quite a wide use of one's own city as a basis of much elementary educational work does not call for either of these things, as the experience of Newark shows.

The experience of Newark has not yet been sufficient to prove that familiar knowledge of the character and daily life of one's own city, and daily practice in making that character better and that life cleaner and more wholesome, are of all knowledges and all habits the most effective in making good citizens. But the mere statement of the theory seems to make it worth while to test it thoroughly.

MOVING PICTURES AS A FACTOR IN EDUCATION

By Pierce J. Fleming, A. M.

In looking back at the progress that education, in its widest sense, has made in the history of the world, one can but be strongly impressed with the mighty part the picture has played in this advancement. In the early days the rude pictures drawn upon soft stone and allowed to harden into the "hieroglyphics" became the historics of the times, and such an inestimable value did they possess that without them, even now, we should be unable to record the world's history and its advancement. That the picture, whether scratched in Assyrian clay or cut into Egyptian stone, served well its worthy and noble purpose is readily admitted by historians, anthropologists, philologists, ethnologists and explorers the world over. In mediæval times the picture assumed an important part in the world's development, sometimes supplementing and at other times being supplemented by the library. Many of the leading incidents of the Bible have been painted and are exhibited in the picture galleries of the world. Should, therefore, all the books and writings in the world be destroyed, many of these incidents could be reproduced for us from paintings and sculpture. Much of the history of many nations is found in the illustrative as well as in the written records. The living picture with its life portrayals and accurate descriptions is the marvel of all these things.

The Cinematograph is a development of the zoetrope, or "Wheel of Life," described by W. G. Horner about 1833, which consists of a hollow cylinder turning on a vertical axis and having its surface pierced with a number of slots. Round the interior is arranged a series of pictures representing successive stages of such a subject as a horse galloping, and when this cylinder is made to rotate an observer looking through one of the slots sees the horse apparently in motion. The pictures were first drawn by hand, but afterwards photography was applied to their production. The modern Cinematograph was made possible by the invention of the celluloid roll film, on which the serial pictures are impressed by instantaneous photography, a long sensitized film being moved across the focal plane of a camera and exposed intermittently. For an hour's exhibition 50,000 to 165,000 pictures are needed. In order to regulate the feed in the lantern a hole is punched in the film for each picture. The dancing and vibrating of the picture in an unpleasant manner is due in a great measure to inaccuracy in the placing of these holes or to the wearing out of them.

In modern times the impulse toward the better and more rapid cognition of a thing is evidently what all educators are striving to develop and satisfy. Regarding this Prof. Wm. James in his "Talks to teachers on Psychology" says, "Novelties in the way of sensible objects, especially if their sensational quality is bright, vivid, startling, invariably arrest the attention of the young and hold it until the desire to know more about the object is assuaged." Again, Dr. Wm. H. Burnham lecturing on Education speaks of the crying need for more action, or at least the representation of it, and less teaching. Surely then, if this be true, no one can doubt the advantage of the moving picture method with its bright, vivid, novel, startling and interesting way of presenting things. Even in the theatres, when one considers that at least four millions of people visit these places daily and remain at least an hour, what a tremendous opportunity there is for an educational as well as a moral uplift.

The Cinematograph with its compelling reality, its unlimited sources from which to draw subject matter, and the remarkable progress which its manufacturers have made in overcoming the defects in its mechanism, represents to-day the most highly evolved instruction-giving instrument for both the many and the few that the present century has produced. When exhibited under the direct supervision of one whose ability as an educator is recognized, it is difficult to prophesy the vast amount of actual good that can be accomplished. J. E. Wallace Wallin, *Pedagogical Seminary*, June, 1910, in discussing the Psychology of the moving picture craze, says: "Human culture must utilize not suppress native capacities, instinctive tendencies, inherited nervous organisms. . . . . It would thus appear that one of the sovereign remedies for inattention and educational waste is to appeal to instinctive interests or to the hereditary forms of attention."

Now comes the question as to how we can stimulate these interests. We must use the stimuli which through the ages have played an important part, the stimuli without which the race could not have developed. What are these stimuli? They are the representations of living things rather than dead, of moving things rather than static things; they are the successive phases of some common phenomenon of nature rather than the bare picture of some one particular phase of it; they are the actual representations of many of the things we read and hear about which by their novelty will attract the attention, and, with that desire so common to all of us and especially the young to see the conclusion of a series of events, will hold the attention to a considerable length of time. It was by attention to the first of these that primitive man protected himself and those dependent on him from his enemies, and it is by the strictest attention to the second of these that we of to-day are making such rapid strides in the acquisition of a more complete knowledge of nature and its workings. The parent or teacher, therefore, should appeal to the instinctive attention and thus work with nature; for by so doing one takes advantage of a vast hereditary impetus; and the potentiality of hereditary interests and involuntary attention so far surpass the potentiality of acquired interests and voluntary attention in the young child that not to use this in the accomplishing of educational ends would be to refuse to accept a priceless gift from nature.

This compelling fascination of the moving picture is due to the fact that it is based on the dynamics of spontaneous attention, the laws that govern our inherited tendencies to attend. For this reason then, the Cinematograph by presenting different processes or pictures in motion rouses in us the instinctive tendency to attend to moving things. It is a fact that a great many times, on account of the very life-like movements performed by the characters in the pictures, that the pictures cease to be illustrations, and are actually changed, especially in the case of those of a more visual type, into animate existences. Exclamations of horror by the observers as a person falling from a building appears to be about to strike the ground, the attempt to shrink from an approaching animal, and various other instances are convincing proofs of this. There is a case reported from Ann Harbor, Michigan, of a small boy, with an air rifle, shooting at a bird portrayed on the screen. This appeal of the Cinematograph to the instinctive tendencies is in a great measure the principal reason why it is so vastly superior to the Stereopticon. The limitation of the Stereopticon to the presentation of static things places it henceforth among the decadent media of instruction. In the case of an automatic pistol the comparison is seen very readily. The Stereopticon is able to present but a very few phases of the mechanism, while the moving picture machine with exposures lasting one forty-two thousandth of a second can photograph in less than one-tenth of one second four hundred successive phases of the firing mechanism of the pistol. All of these can be presented at a uniform rate of speed, so that each and every minute detail can be distinguished very readily.

The Cinematograph also takes advantage of other instinctive interests. The constantly recurring sharp contrasts in the film as regards color, size and other characteristics, and the introduction of the unusual, the comic, the bizarre, etc., furnish the foundation of appeal to our instinctive desire for something new, something different. Again, the facility with which a scene, unparalleled in actual life and with so unexpected a denouement, can be made and projected, shows how the moving picture can, in a great measure, utilize the forces of attention and curiosity. Is it anything to be wondered at therefore that millions daily sit entranced before the cinematographic screen when their attention, with hardly an effort on their part, is not only attracted but even held for a comparatively long time?

Another very commendable and until a short while ago unheard of feature of the moving picture is the possibility it presents for the popularizing of instruction in subjects vital to all of us and regarding which little or no reading matter is available. In a great many places, notably Chicago and New York, this feature of the moving picture is being thoroughly tested and up to the present gives every indication of becoming a permanent part of the programme wherever used.

Geo. L. Voorhies, Secretary-Treasurer of the Chicago Principals' Club, District No. 4, sends the following account of the use of moving pictures in the schools there:

"The Board of Education has established nine social centres in the public schools and as a part of the same. They are open two evenings a week and are available for the parents as well as the children. These centres offer the following programme of instruction and entertainment:

"Reading rooms, music, both vocal and instrumental, gymnasium work, parlor games, amateur dramatics, dancing and the motion picture lecture.

"In regard to the scope of the moving picture work, I believe it should be entertaining as well as instructive, and should appeal to the various sentiments of interest, wonder, humor and pathos."

The following is a programme that Mr. Voorhies, with the co-operation of others in the same field, has mapped out:

Industrials: (a) Food: *e. g.*, Wheat; harvesting, milling, baking.
(b) Clothing: *e. g.*, Cotton; picking, ginning, weaving.
(c) Shelter: Lumber; logging, milling, building.
(d) Transportation: Railroads; surveying, building, running.
Nature: (a) Plant growth: Seed, plant, flower, fruit.
(b) Animals: Egg, embryo, infant, adult, adult activities; fish hatcheries, ostrich farms, etc.
(c) Minerals: *e. g.*, Iron mines, smelting, steel mills.

Travels: (a) Scenic country from train.
  (b) Ocean life on steamer, coast and train, river scenery from steamer, *e. g.*, Hudson, Rhine.
  (c) Views from aeroplanes and other odd modes of travel.
  (d) Touring: Alps, canyons, Yellowstone, Congo.
Art: (a) Panoramic trips through noted museums, parks, cities.
  (b) Construction of paintings, sculptures, tapestries, buildings.
Anniversaries: (a) Parades, coronations, Mardi Gras, Veiled Prophet.
Drama: (a) Classic plays by noted casts, extravaganzas.
Athletic: (a) Field sports, ball games, rowing, races, drills, exercises.

On some of these subjects films are already available; on others they can be manufactured.

That the manufacturers of moving films are taking advantage of the educational possibilities of moving pictures is evidenced by the "Free Educational Exhibit of Animated Photography" given some time ago by one of the supply houses in Cleveland for the benefit especially of the educators of the public and private schools there. Views were exhibited of the leather industry, wild birds in their haunts, the formation of drops of water, various chemical processes, fruit growing and the like. All present were enthusiastic in their approval of the moving picture as an educational aid.

Prof. Frederick K. Starr, Chicago University, expresses his appreciation of the educational advantages to be derived from the moving picture in the following passage:

"'I have seen Niagara thunder over her gorge in the noblest frenzy ever beheld by men; I have watched a Queensland river under the white light of an Australasian moon go whirling and swirling through strange islands, lurking with bandicoot and kangaroo; I have watched an English railroad train draw into a station, take on its passengers and then chug away with its stubby little engine through the Yorkshire dells,past old Norman abbeys, silhouetted against the sky line, while a cluster of century-aged cottages loomed up in the valley below, through which a yokel drove his flock of Southdowns; I have beheld fat old Rajahs with the price of a thousand lives bejeweled in their monster turbans and the price of a thousand deaths sewn in their royal nightshirts as they indolently swayed in golden howdahs, borne upon the backs of grunting elephants; I saw a runaway horse play battledoor and shuttlecock with the citizens and traffic of a little Italian town whose streets had not known so much commotion since the sailing of Columbus; I know how the Chinaman lives, and I have been through the homes of the Japanese; I have marveled at the daring of Alpine tobogganists and admired the wonderful skill of Norwegian ski-jumpers; I have seen armies upon the battlefield and their return in triumph; I have looked upon weird dances and outlandish frolics in every quarter of the globe, and I didn't have to leave Chicago for a moment. No books have taught me all these wonderful things; no lecturer has pictured them; I simply dropped into a Moving Picture theatre at various moments of leisure and, at the total cost for all the visits of perhaps two performances of a musical show, I have learned more than a traveler could see at the cost of thousands of dollars and years of journey. Neither you nor I fully realize what the moving picture has meant to us, and what it is going to mean. We 're living at a mile-a-second gait in the swiftest epoch of the world's progress, in the age of incredibilities come true. The talking machine has canned the great voices and master melodies of our time, but the moving picture machine has done more,—it is making for us volumes of history and action; it is not only the greatest impulse of entertainment, but the mightiest force of instruction. We of to-day take so much for granted; we are so thoroughly spoiled by our multiple luxuries that we do not bestow more than a passing thought upon our advantages, because the moving picture machine is an advantage, a tremendous vital force of culture as well as amusement. Its value cannot be measured now, but another generation will benefit more largely than we of to-day can possibly realize."

The United States Government has now recognized the educational value of motion pictures for the purpose of impressing on the minds of her men geographical, historical, military, naval and other events in a manner calculated to produce a lasting memory. The U. S. Battleship Vermont was the first to order regular film service, and others have since followed. Other branches of the Government service are already making use of the moving picture machine for special work, notably the Reclamation Service. In a scientific way the men of this branch are achieving splendid results. The recent pictures taken of the Grand Cañon of Arkansas, the Royal Gorge, and the Sky Line Drive, by W. J. Tubken, of the United States Reclamation Service, and Geo. L. Beam, Official Photographer of the Rio Grande Railroad, were in every way successful. The films measured 21,000 feet and are the first moving pictures taken by the Reclamation Service in showing the rapid progress of the West. These pictures will be shown to the members of Congress, and after being displayed in a series of lectures will be loaned to Lyman Howe for exhibition in various other parts of the country. This feature of the moving picture is as yet quite undeveloped, but if more universally used would effectually put a stop to the nefarious schemes of unprincipled speculators dealing in Southern and Western lands. Up-to-date legitimate real estate dealers could, with the aid of moving picture exhibitions, show what they have for sale in its actual condition, and in this way do much toward helping the much needed migration to the West and South. It is very evident then that the problem before those who believe in the efficiency of the moving picture as an educational help is to demonstrate this efficiency to the public. This can best be done by the more frequent display of scientific films in the picture theatres. When some of the valuable things that may be taught by them have been learned, then will parents realize how much the Cinematograph would aid in the education of their children.

Regarding the educational advantages offered by the moving picture, Thos. A. Edison, the well known inventor, says: "Moving pictures bring to every one an absolutely clear idea of foreign peoples through their customs, through scenes of the world and through the industries and pursuits of man. They have a tremendous educational effect. This is true even of the seemingly purely amusement motion pictures. Little cross sections of life are shown, staged and acted better than are the shows given at a considerably higher price. The motion picture is an important factor in the world's educational development. . . . . It will wipe out various prejudices which are often ignorance. It will create a feeling of sympathy and a desire to uplift the downtrodden peoples of the earth. It will give new ideals to be followed. For these reasons I believe that moving pictures in the hands of broad minded, intellectual and informed workers are for the world's good, for the innocent amusement and the moral advance of the great masses of the people."

The Civil Engineering Society of the Massachusetts Institute of Technology, in order to give its members some idea of large engineering projects, made use of the moving picture. Films on the Panama Canal, the building of a railroad in Canada, manufacture of steel rails, and other like subjects were shown. Regarding its success Isaac Hensmann, President of the Society, says, "It was not especially expensive and was greatly appreciated by all who saw it and well worth the trouble."

Sir E. Ray Lankester, the eminent biologist, expresses his keen appreciation of motion pictures in the following terms: "The method of instantaneous photography of minute organisms is a valuable means of research. Points of structure are revealed which were not previously seen, and, moreover, these new discoveries are permanently recorded. For the study and analysis of the movement and the details of the action of locomotor organs (such as cilia, flagella and pseudopodia) the instantaneous films are nothing less than a revelation. While these methods do not take the place of the actual microscope they can supplement it in an invaluable way. Moreover, they can give to large gatherings of people, with the greatest ease and absolute truthfulness, a real view of microscopic life, and enable every one to have a true conception of what the microscopist and biologist are actually studying; they make science less remote, less the possession of the privileged few; and they enlist the sympathy and interest of our fellow citizens for its glorious work. I look forward to the provision, not later than next year, of a cinematographic lantern in every board school and in every college class room, and if I still had a biological laboratory under my supervision (as for the most of my past life I have had) I would obtain the film-producing photographic apparatus and set to work to make discoveries, and,—what is a great charm of the new method,—their simultaneous record, by producing films of every kind of moving microscopic organisms. I should study not merely the combined effect when rolled through the lantern, but the actual instantaneous phase permanently printed in each picture of six thousand which make up a five-minute record." It is very evident that Sir Lankester's praise of motography would be equally applicable in the realm of the physicist, the naturalist, and even the chemist.

The chief difficulty in presenting these and other scientific films before the public, or indeed before the special audience, lies not in the vagaries of public taste, but in the faulty system of distribution at present employed in marketing films. England has already taken a step toward the establishment of an open market for the disposal of educational subjects of all kinds; and, unless similar tactics are adopted here, this country will soon fall behind other countries in the development of educational motography. All the scenic and industrial films that can be obtained are used by the Education Alliance in its moving picture shows given twice a week in New York City under the direction of Boyd Fisher, Director of Entertainments. He says: "The number of educational institutions which are giving moving picture shows is increasing greatly, and they are beginning to make their demand for educational films felt. To meet his demand the General Film Company proposes soon to establish an educational bureau which will serve as a sort of clearing house for the educational movement in connection with the moving pictures."

At Madison, Wisconsin, the use of moving pictures was an experiment, carried on until all the children of grades seven and eight had had the benefit of at least one exhibition. The manager of a moving picture house interested in the use of moving pictures for educational purposes, furnished the machine, films and an operator without cost. The films selected were Oliver Twist and Lancelot and Elaine. The story was told before the pictures were shown. As the work was arranged, the picture was a form of story telling. Where the child from his own experience could not supply the setting, as in Lancelot and Elaine, the pictures were of very great advantage. Mary A. Smith, Librarian, speaking of the experiment says: "I am certain it had some very good features. Teachers and others whom we invited were not hypercritical, in fact not at all as critical as we expected." This is but one of the many examples of how unjust criticism and lack of faith in the educational possibilities of the moving picture by people utterly incompetent to judge, has not only been overcome, but, after a fair trial under anything approaching perfect conditions, has won these critics over to its side.

Chronophotography, on a fixed plate, has furnished the experimental solution of many problems in Geometry, Mechanics, Physics and Physiology that no other method could so readily have solved. In Geometry, for example, the "formation in space of geometrical figures of three dimensions," defined by Geometers as "figures that are generated by straight lines or curves of different forms displaced in different ways," is a difficulty of no mean proportion. Chronophotography, however, realizes this conception completely. In Mechanics, also, the very many difficulties which Gallileo and Atwood had to surmount in order to determine the laws of motion, of velocities and of accelerations, will, for the future, be saved in like cases for those who make use of chronophotography for this purpose. Hydro-dynamics is generally looked upon as one of the most complicated sciences. All the difficulties met with here find their experimental solution in chronophotography. In Physiology it is to the physiological study of the different gaits of animals and of the functional movement of their different organs, etc., that chronophotography is directed. Various movements of the jaw in speech, which are exceedingly difficult of observation, are reproduced clearly and accurately through chronophotography. It is not out of place to say that the Cinematograph may be a help to the psychologist. Children singing may be photographed, and their different facial expressions, such as the wrinkling of the brow, opening the eyes wide, false position of the throat, and so forth, may be studied and the results noted. At Dresden, as reported in the *Pădagogisch-psychologische Studien*, a very excellent film has been procured showing the impulse to movement expressed by attitude, facial expression, and so forth. Pathological phenomena may be presented vividly and accurately to a large number of students.

As a means of instructing the pupils of the city schools in the science of warding off diseases and unsanitary conditions, Dr. M. Goltman, Superintendent of the Memphis Health Department, has decided upon the installation of a moving picture apparatus. The health superintendent, with the co-operation of the School Board, will arrange the moving picture lectures so that the machine can be taken from school to school in a systematic manner. With it will go an operator who is competent to speak advisedly upon every subject presented. The subjects will include the development of the fly, the development of various germs, and everything of a sanitary and unsanitary character which a student in the public school ought to know.

The doctors of insane hospitals and the superintendents of penal institutions have placed the stamp of approval on the moving picture. Moving pictures are to be shown at the Elgin (Ill.) state hospital to assist in the cure of the insane, and to offer pleasant diversion to the incurable. "Moving pictures will help us materially in curing patients," says Dr. Wilgns. "They will take the minds of the patients from their misfortunes, and like any other harmless diversion will stimulate the brain." With a moving picture show—the first that half of them had ever seen—the inmates of the Western Washington Hospital for the Insane at Fort Steilacoom, Washington, were given a Christmas Eve entertainment. "The moving picture machine," Superintendent A. P. Calhoun says, "has been installed as a permanent feature of asylum life." The inmates of the United States Penitentiary at Leavenworth, Kansas, have motion picture entertainments at regular intervals. As an educational agency in preventing the spread of tuberculosis, the moving picture is being used extensively in all parts of the country. Not only in Rochester, whose playgrounds are admittedly the best in the country, but also in Cleveland in connection with their playground work, the moving picture is being used with very good results.

The possibility of teaching Geography with the aid of the Cinematograph is deserving of consideration. When a child is desirous of knowing what a country looks like, does it want to know the exact height of a mountain, or the length in miles of a river? Is it not, on the other hand, sufficient to know that there is the highest mountain in this or that country, or that, that country has the longest river in the world, if one can but see the actual representations of the people, their manner of living, their customs and their industries? The Cinematograph, with its wonderful views from the polar regions of everlasting ice to the burning plains of equatorial Africa, afford a substitute for that heretofore irremedial weakness of geography text-books, namely, the absence of reality. Give the child his geography lesson from the screen together with a part of the regular lecture by the teacher, and, instead of a dull, uninteresting memory lesson, that child has learned a number of facts concerning some city or country, that will never be forgotten.

Quite apropos of this suggestion of the use of the Cinematograph, the question as to which of the two predominant methods of teaching geography now in vogue should be used might well be discussed here. If, in accord with Colonel Parker's method, the end to be attained in our schools by the teaching of geography is to give the pupils such a knowledge of the physical contour of the world as would enable them to reproduce its surface in a series of raised maps or casts, then this method is evidently the correct one. How many of the present-day educators though would justify such an expenditure of the child's time and energy as is required in the committing to memory of the boundaries of the different states and countries, the length in exact terms of the rivers, the height in feet and inches of the mountains of a country, and the like? Is it not far more essential that the child's mind be taken up with the acquisition of the more characteristic facts about the different countries—the fauna and flora, the agricultural, mineral, manufacturing and commercial interests? It is by a study of geography with this end in view that a child may come to know and understand the causes that have led to the shifting of populations, to the growth of cities, and to the changes that have occurred in the modes of government. It is just these characteristics that the moving picture brings to the child's mind better than any other method and in a way calculated to make a lasting impression. In so far as description occupies a place in the teaching of geography, in just that measure should motography supplement the use of text-books.

Ordinary photography has left much to be desired in the study of the movements and habits of bird, animal, and insect life. One of the very characteristic positions of an animal, namely, that of seeking and capturing its prey, cannot be properly presented by ordinary photography, nor can it give a graphic idea of the facial expressions and characteristic movements of an animal under observation. The moving picture machine does away with these difficulties, and it is now possible to place before a natural history class "living pictures" of bird, animal and insect life, which, by faithfully reproducing every action of the subject under discussion, more vividly impress the minds of the students than any lecture illustrated by still pictures or drawings. There can be no question as to the importance, to students of natural history, of using nothing but photographs as illustrations. No matter how well the artist may draw or how skillfully the engraver may copy, there cannot be the same accuracy of detail as it is possible to obtain from a photograph. Motion pictures would give to natural history classes the opportunity of studying subject films in which the specimens,—some of which are rapidly becoming extinct,—are depicted moving amid their natural surroundings. Of motion pictures in their relation to Zoölogical Science, Mr. P. Chalmers Mitchell, M. A., D. Sc., F. R. S., Secretary of the Zoölogical Society of London, says, "I have the pleasure to thank you (meaning a London Film Co.) in the name of this Society for the exhibition of films of zoölogical studies shown at our last scientific meeting. I am glad to take the opportunity you give me of stating that, in my opinion, such studies are a great aid to the educational side of zoölogical science. They are not only fascinating as spectacles, but they enable the events in the life history of many animals, and in particular of the lower animals, such as insects, to be displayed to a large audience in a fashion far beyond the possibilities of ordinary photographs, even when accompanied by the most vivid descriptions. The combination of patience and skill, and the technical excellence of your apparatus has brought about a most startling result."

There are at present films available upon the following topics:

Agriculture, animal life, bacteriology, biography, biology, botany, entomology, ethnology, fisheries, geography, geology, history, industrial subjects, kindergarten studies, mining and metallurgy, microscopy, military, naval, natural history, ornithology, pathology, pisciculture, zoölogy, railroad, religion, travel, and scenic, tropical subjects.

There are also a great number of other natural history subjects whose use in the schools would impart a thorough knowledge of these subjects. The Lion Hunting film, obtained last summer in British East Africa, besides vividly illustrating the life of the monarchs of the tropics in their natural surroundings, also illustrates in an incomparable way the general contour of the country and the plant life with which it abounds. Many other films have been obtained showing the life and habits of other wild animals, the very interesting characteristics of birds about which little was known, until, with the advent of the moving picture machine, there were revealed the inmost secrets of the lives of many rare specimens. Rare specimens of eagles, perched upon inaccessible rocks, have been photographed, and the rearing of the young of the sea-birds is plainly seen. Again, the living picture triumphs in the case of insects; and the number of films now on the market is indeed amazing. They range from moths to millepedes, and from beetles to butterflies. There exists at the Brighton Aquarium probably the finest collection of fish in captivity in the world, fish from the tropics, the Arctic regions, and from the temperate zone. A film of these has been secured and one can see on the screen live lobsters, dog fish, alligators, skate and cuttle fish, and in fact any other kind of fish, just as well in the north of Scotland as in the centre of China.

One of the serious defects noted in the moving picture is its inability to display natural colors. It requires but little imagination to realize the enormous possibilities of the moving picture plus color photography in education. It is predicted that this drawback will shortly be overcome. Cinematograph films produced by ordinary photographic processes, being in black and white only, fail to reproduce the coloring of the subjects they represent. Coloring by hand has been found too expensive, and, moreover, does not yield very satisfactory results. Attempts to adapt three-color photography, by using simultaneously three films, each with a source of light of appropriate color, and combining the three images on the screen, have to overcome great difficulties in regard to maintenance of register, because very minute errors of adjustment between the pictures on the films are magnified to an intolerable extent by projection. In a process devised by G. A. Smith, the results of which were exhibited at the Society of Arts, London, in 1908, the number of color records was reduced to two. By his process, which is somewhat complicated, he succeeded in giving a reproduction of a scene photographed in colors which were sensibily the same as those of the original. "Motography," a Chicago publication devoted exclusively to a study of moving pictures, gives the following account of the use of color photography:

"The first public demonstration of color photography in moving pictures ever seen in Chicago was given recently at the Union League Club. One of the most interesting pictures shown was the famous "Bud to Blossom." The picture represents an actual moving picture photograph of many varieties of flowers bursting into bloom. The blossoming of the flowers was hastened by every artificial means possible, and photographs taken every seven seconds for two days."

M. Cervais Courtellemont, a noted French explorer in the extreme Orient, mainly known for his keen studies of the

Islamic world, is doing a noble work for mankind in preparing and presenting scenes of unusual interest in the East. He gives one the impression of always wandering on the planet with an objective in his hands, securing results which have been at all times of the greatest documentary value. China, Japan, Madagascar, Persia, Asia-Minor, Turkey, Arabia, Syria, Palestine, Balkan States, Tunis and Egypt have disclosed for him the most picturesque beauties of nature. More particularly since the Lumieres created their wonderful process of colored slides have the treasuries of Cervais Courtellmont been increased in value and beauty. Foremost in the practical application of the Lumiere process he has produced colored visions of the Oriental countries without equal.

On March 29, 1911, the George Kleine Film Company released one of the best fully educational reels ever produced in America. It is a split reel consisting of two educational subjects, the first entitled "Dr. Charcot's Trip Toward the South Pole," and the second "The Cormorants or Japanese Catching Fish with Birds." The scenes depicted in "Dr. Charcot's Trip Toward the South Pole" were obtained during two years' exploration in the Antarctic by Dr. Charcot, an eminent French explorer. The first polar picture is of "an ice-bound sea"—a phrase often met with in geography text-books but understood in quite a new light by means of this picture. It is a bleak and forbidding picture, with its heaving ice floes and angry waters darting and swirling between every crack and fissure, but still has a weird and affecting beauty. Wonderful pictures of frozen regions follow, showing vast expanses of snow and jutting ice crags. The last few pictures show a colony of penguins, those strange man-like birds who seem to enjoy a comfortable existence in this forsaken spot. The second subject shows a very curious method employed by the Japanese in catching fish. Cormorants are birds, indigenous to Japan, which subsist upon fish. The Japanese have tamed these birds and have turned their fish catching abilities to their own use. Many glimpses into the homes of the Japanese are shown, and this fact alone makes the picture a valuable one for those of the West who are interested in the welfare of their Eastern neighbors.

Paul J. Rainey, who expects to spend three years in East Africa, India, Borneo and the Malay Archipelago, departed February 1st. With Mr. Rainey is Dr. M. E. Johnson. They have arranged to send many specimens to the Smithsonian Institute at Washington and to the New York Zoölogical Society. An item of their equipment for the expedition is a moving picture outfit, including 100,000 feet of films.

The very latest possibility for the use of moving pictures is that of animated journalism. The psychology of the trained photographer, whose instinctive impulse, when a shot is fired or a magazine explodes, is to press the button of his camera, would be an interesting study, but the fact that the omnipresence of the machine is rapidly creating a complete pictorial mirror of life is more important. So well are the camera men "covering" the events of the day that they threaten to drive the reporter out of business. They have in London three daily papers, each of enormous circulation, which contain practically nothing but news pictures with descriptive captions. They have more:—Pathé Frères, the cinematograph manufacturers, have established a daily service of moving pictures of the news. The enterprise, which goes by the name of "The Animated Gazette," is a complete news organization, with an editor, Mr. Steer, who has abandoned the old methods of Fleet Street for the new journalism, and a staff of five thousand "photo-correspondents" scattered pretty well over the world. The product of this organization is a cinematograph film which is sent out to a circuit of moving picture theatres, and is already being seen daily and nightly by more than two millions of people. An idea of the circulation possibilities of this kind of a news dispenser may be gathered from the fact that New York to-day has two hundred and fifty moving picture shows, that London has five hundred, that every city and town of America and Europe has from one to a dozen. There is little doubt but that the new idea will soon be at work in America. The editor of "The American Animated Gazette" would sit in his office in New York, scan telegraphed "flashes" of the news of the world and send out his orders. Where the old-fashioned managing editor would send for a "thousand words Roosevelt," he will wire his correspondent, "Send five hundred yards Roosevelt,—feature the insurgent smile," or he will order, "Rush one hundred and fifty yards aviation meet, two hundred if Post turns handspring in air." Journalism has never been an altogether restful enterprise. Some had fondly thought that it could not grow more "animated," but Mr. Edison has made the world over in many ways.

How many of us doubt that some day the people of India, like the people of this country, will rise up against English rule and assert their independence? What they need there is not money or forces, but simply the knowledge that their English rulers are men and not gods. Mr. Henry Kitchell Webster, writing of his travels in India, suggests this and says that he is firmly convinced that the one most important factor in bringing about this change of affairs is the Cinematograph. "It is surely and silently bringing to the minds of the people there a knowledge of the White Man of the West as he really is. You find it (the Cinematograph) everywhere, not only in India, —from Simla to Moulton,—but through the whole East from Aden to Singapore and on, over the edge of the beyond in Borneo. Indeed, it was in Borneo, Dutch Borneo at that, in the little town of Pontianak, which squats in its marshy little maze of canals exactly on the line of the Equator—the Venice of the East, as somebody in a frenzy of irony once called it,—it was here that the idea broke over me in its full force. The show was in a big wooden building with galleries on three sides. The film that was running when my companion and I entered showed the breaking up of the ice with ice breakers in the harbor of Christiania. The only person in the audience besides myself who had ever seen a piece of ice large enough to cool a highball was the Scotch Engineer of the Chinese tramp that had brought me to Pontianak. The show lasted for hours, and the pictures were just what we see here,—domestic tragedies, domestic comedies, domestic farces of the Western world,—our own world. Here were white men at home,—men not gods, if you please,—doing things for themselves, carrying burdens, taking orders, going hungry, getting arrested; a street sweeper, a white man, being run over by an automobile; a white woman, a memsahib, being defied by her cook and having her dishes broken and being left to peel her own potatoes; and if it looked strange to me after six months, what was it to the keen faced Malay boy who watched it all with such rapt attention? What thoughts were going on in that mind of his about these gods? Were they gods after all?" The writer adds that he has no quarrel whatsoever with the methods the English employ in the government of these people. Whether they are within their rights or not makes no difference to him. The inference that must be drawn from the foregoing, however, is this,—the people of India, and especially the young of the lower class, are being educated.

What then is the function of which motion pictures as an aid to pedagogic instruction? Surely no one believes that they are intended to drive out or supplant the school. The motion picture *has* entered the school, and there is reason to suppose that it will do so more and more, not as an invader or conqueror, but as a humble and obedient servant trying to help along and render efficient the established methods. The object of this new method, then, is to furnish illustrations and point examples, to reduce the general to the particular, to render the subjective objective, to clothe the abstract in forms of the concrete. It is the office of the motion picture, just as it is of any still picture, to help in the reducing of general principles to particular applications. If still picture illustrations help in the teaching of geography, history, physiology, and so forth, how much more so does the motion picture illustration help with its bright, vivid and as yet novel way of presenting things?

BIBLIOGRAPHY

COURTELLEMONT, M. CERVAIS. *Kinematograph and Lantern Weekly*, London, Mar., 1911. p. 80.

CRIPPEN, JAMES B. An Educational Innovation. *Nickelodeon*, Chicago, Feb. 25, 1911.

Education by Cinematograph (Abstracted from the *Bioscope Nickelodeon*), Chicago, Feb. 18, 1911.

JAMES, WILLIAM. Talks to Teachers on Psychology, and to Students on some of Life's Ideals. New York, 1899. pp. 45-47.

LANKESTER, Sir E. Ray. Biological Motography. *Bioscope*, London, Dec., 1911. pp. 3-6.

LEMKE, HERMAN. Die Kinematographie als Hilfsmittel der Psychologie, *Pädagogisch-Psychologische Studien*. XI Jahrgang. No. 12. p. 5.

MAREY, ETIENNE JULES. The History of Chronophotography. Smithsonian Inst. Annual Report for 1901. Wash., D. C., 1902. pp. 317-340.

SMITH, G. A. Cinematograph, Encyclopædia Britannica. Vol. XI. p. 374.

WALLIN, J. E. WALLACE. Moving Pictures in Relation to Health, Delinquency and Crime. *Pedagogical Seminary*, June, 1910. Vol. XVII. pp. 129-142.

WEBSTER, H. KENT. Little Stories of Great Films. *Nickelodeon*, Chicago, Jan. 21, 1911. pp. 81-82.

WEBSTER, HENRY KITCHELL. Gods and Brothers. *Everybody's*, May, 1911. pp. 579-92.

THE PSYCHOLOGY OF THE CLUB; A STUDY IN SOCIAL PSYCHOLOGY[1]

By Louis D. Hartson

Introduction

The Spectator says that there is nothing, as far as he can see, that any human being can desire to do, to think, or to work for, that has not a society all ready for him or her to enter. The path of life is beset with membership from the cradle to the grave (74). The kindergarten has its alumni association, invalids have their Shut-In Society, the poor organize, the rich organize, everybody belongs to some sort of a club. At a recent murder in one of our large cities the jury, though it had shown itself unable to agree on a verdict, agreed at once, as soon as discharged, to organize as a permanent society, pay dues, and have an annual dinner. The Spectator expects soon to see an announcement of the formation of the Daughters of Ellis Island with Wilhelm der Grosse Chapters or Lusitania Leagues.

For the purpose of studying this phenomenon of the social structure data have been gathered ostensibly in all the most prominent forms of its manifestation. Obviously those societies formed by one group of people for another group, such as societies formed by adults for children, are of less importance for psychological interpretation than are societies formed by groups for their own membership. We present the data therefore only of this latter type of society. In order to have a generic term which will include all such societies, and because the word society .has a double meaning, we employ the term club. The object of this paper is to make a psychological interpretation of the club as a social institution. The first section presents the facts regarding the existence of clubs in this country important for this intrepretation. Beginning with the field of children's group activities the course of development is observed through the gang into the club, which is followed in its evolution to the mature form found among adults. Having thus before us the facts our problem consists in interpreting them on the basis of what is known of functional psychology.

---

[1] In this all too unsatisfactory manner the writer desires to acknowledge the helpful assistance he has received in the preparation of this thesis. Primarily in point of time should be mentioned the inspiration received from Dean Thomas M. Balliet, of New York University, and the two years training in boys' club work under Miss C. I. MacColl, of Christodora House, New York City. For material used in this thesis the writer is indebted to Prof. Will S. Monroe, of Montclair, N. J., and Miss Clare Lyon, of Lidgerwood, N. Dak. In the interpretation of the data a debt has been incurred to all of the Clark University faculty, and particularly to Dr. T. L. Smith who is truly the research assistant of all the students.

SECTION I. PRESENTATION OF THE DATA

Chap. I. Group and Gang Life in Children

The club viewed genetically has a gradual growth. It does not spring up as a mature institution at any one definite chronological period in the life of a group of individuals. Its beginning is to be traced back into the group activities of childhood. Gulick says that the first appearance of group games is at about 7, in which games the centre of interest is one's self in relation to others (34, p. 39). The games played are the simple ball games, such as one old cat, running games like tag, prisoner's base, hide and seek and black man, and the marble games. There are throwing games like duck on the rock, the highly individualistic game of stunts or follow the leader, in which one boy performs some difficult or daring feat and the game consists in having the other boys one by one, do the same thing in the same way. Other games of this period are leap frog, mumble the peg, etc. This is the time when predatory activities gain prominence as do the closely allied activities of hunting, fishing, swimming, skating, snowballing and the so-called savage activities. More highly organized group games appear at approximately the age of 12, according to Gulick. Teamwork is the keynote now. The more common of these games are baseball, basketball, cricket and hockey (34).

Zach. McGhee found that group games began earlier than 12 (50). He gathered returns from about 10,000 children in South Carolina between the ages of 6 and 18, which designated the 5 favorite games of their choice from a long list submitted to them. Baseball was found to be one of the favorite games by 57% of the boys at the age of 6, and football by 43%. Even though these games be poorly organized among boys of this age it is evident that they are very popular. In later years they become even more popular. The curves for baseball show an upshoot at 11. From being the choice of 57% at 6 years it is preferred by 72% of the boys of 11 and continues at that level till 18, the age limit of the study. Football shows a steady growth in popularity from 6 to 16. Considerable difference is evident between the sexes as to the degree of organization and co-operation in the games preferred. Having grouped the games which require co-operation, McGhee found that this curve was low for girls throughout the whole period from 6 to 18. His returns support the thesis that games requiring organization and rules do not appeal to girls. Of the 12 games receiving the highest number of votes 5 are totally lacking in co-operation, while most of the others have but little organization. Croquet, the only organized game that is anywhere high on the girls' list is very low until the age of 12. On the other hand unorganized games are abnormally high until that age. Girls' favorite plays for the entire period from 6 to 18 rank as follows: dolls have the first place, chosen by 28.7% of the girls; jump rope, 21.6%; between 10 and 22% are ranked authors, crokinole, open gates, parchesi, hide and seek, drop handkerchief and dancing.

Scott characterizes the period from 9 to 12 as one of increased activity in which the games are co-operative but poorly organized (66). His data are gathered from returns to a questionnaire sent out in Springfield, Mass. In 90 cases the returns came from adults; in the other 490 they were from boys of 10 to 18 years. Boys not belonging to a group were asked whether they had a few chums. The returns showed that 68.5% belonged to a group and that 18% of the others had chums. Scott considers a group containing less than 5 as too small to constitute a gang; if 4 boys associate together he considers them as chums. Groups as large as 9 were found among the younger boys. With increasing age the size of the group decreased. He declares the period from 12 to 14 to be that of the closely organized group. Two-thirds of the boys he questioned said that their gangs had secrets, though sometimes this was nothing more than a certain whistle or call. One half of them had some sort of an initiation.

The period from 6 to 10 is the time when the formation of chumship is most frequent, according to Bonser (11). In studying 756 boys and 1,279 girls in Illinois he found that the tendency toward chumming becomes very strong in girls as early as 5 years and reaches its height at 6, when 15% of such friendships were formed. Among boys this tendency develops a little later and reaches its minimum at 10. Bonser treats only the relationships between two individuals, on the basis that three is a crowd. Of the 2,000, only 40 state that they never had chums. His returns indicate that after puberty the formation of this type of relationship falls off very rapidly. Nearly half of the answers were from pupils of the latter half of the high school course. Between 13 and 17 the curve of frequency of forming chumships falls from 8 to less than 1% of the cases. Chums of early years continue to be such through the later years. Chums are reported as being of the same age. Differences in the ages of two chums exceed 2 years in only 2% of the cases for boys and 1% for girls. Bonser says that if older associates are chosen they are not made chums or cronies of the confidential sort (11, p. 224). Those reporting dispositions opposite to or different from their chums are 22.2% of the girls and 24.2% of the boys. The remaining number replied that they were the same or similar. Statements were made by 18 boys and 26 girls that they never had chums. In most of these cases, as shown by the other answers, there appeared an over developed self-consciousness which restricted naturalness. Of the 756 boys and 1,179 girls reporting but 12.4% of the former and 16.6% of the latter state that the friendship with their chums were broken. Of these, 34 boys and 62 girls give as their reason the fact that they moved away from the neighborhood in which the chum lived. Quarrels were stated as being the cause by 12 boys and 14 girls.

A study of the 146 boys in the Lyman School, Westborough, Mass., (a reform school) by Puffer (61) showed that 128 of them had been members of gangs. These boys ranged from 11 to 16 years. The average age of the youngest boys in the gangs studied was 12.1 years, that of the oldest was 16.25 years. The youngest boy in the gang was 7; the oldest was 19. Only 3 of these gangs existed in country towns and only 4 from places less than 10,000 in population. This only shows, Puffer says, that boys from country towns are not sent to a reform school. These 128 boys belonged to 66 different gangs. Of these, 44 had 1 leader, 8 had 2 leaders, and a few had more than 2. The average size of the gang was 10. In 24 cases the leader informally took upon himself that office; in 4 cases the boy was informally given the leadership, and in 4 more cases he was elected by ballot. In most cases the boys did not know how the gang started, for only 17 could give any report. Of these, 6 said that the gang was started by the leader; 11 stated that they had been in the gang 5 years or more. Strangers were treated with little sympathy or were maltreated. Loyalty to the group was found the dominant motif in the rules. Of the 51 rules reported by the various gangs, 18 were against "squeeling," 8 against lying to one of the gang, and 8 required standing by one another in trouble. Out of the 54 records there were only 7 gangs which did not meet every day; of these, 3 met 3 times a week, 2 twice a week, and 1 once a week. In the records of 63 gangs all but 4 had regular meeting places. The gangs have a proprietary feeling for the neighborhood of their meeting place. Only 8 of these gangs were exclusive in membership, though they generally had a definite rule to entrance to regulate. These regulations show that they did not have to recruit members; that the new boys wanted to get into the gang. Out of 48 gangs only 11 report any form of initiation. The chief occupation of these gangs was some form of physical activity. Under this title may be grouped co-operative and nonco-operative games, fighting, predatory and migratory activities and the other outdoor occupations designated as savage. The occupations which did not find their chief element in physical activity include theatre-going, mentioned by 38 gangs, card-playing by 25, gambling by 12, smoking by 30 and drinking by 9. The attendance at theatres was not by gangs but by twos and threes. However the necessary money was obtained by gang activity. Of the physical activities, co-operative games were the most popular. Out of 66 gangs 53 have records of games requiring co-operation, such as baseball, football, hockey, basketball and cricket; 49 of the gangs spent part of their time hunting, fishing, berrying, building boats, shanties and dugouts, and camping. Predatory activities in the form of stealing were reported by 43 gangs. Fighting between gangs both of the innocent snowball variety and with fists, stones and clubs, was reported by 22 different gangs. Activities which resulted in plaguing people, such as tick-tacking on the windows, ringing doorbells, calling names at Chinamen, Jews, Italians and policemen were mentioned by 45 gangs.

Browne (12) made a study of 'gang instinct in boys' which corresponds with the data Puffer gathered, though the sources were rather different. Browne went through books on boy life by Aldrich (5), Howells (41), Hutton (42) and Warner (85), the studies of Sheldon (67), Gulick (34), and Culin 20), the reminiscences of 50 students at the International Y. M. C. A. Training School, newspaper stories and the answers received from a number of boys on the street. Of the 50 students, 25 had been members of gangs. In 20 cases the ages of the members of the gangs was given. The extremes were 7 and 18. Within the gang the disparity of ages ranged between 2 and 11 years (the latter exception being in a town gang of 75 boys). The medium disparity in ages was 4.5 years.

Stewart Culin (20), writing in 1891, gives the names of 50 different gangs in Philadelphia which he obtained by personal inquiry among the boys along the Schuylkill River front. He gives no other details except to say that they had their laws and customs, their feuds and compacts. The names would suggest that the boys were of tough character. Similar conditions have been reported by social workers in other cities. Jacob Riis wrote in 1890: "The gang is an institution in New York. . . Every corner has its gang. . . The gangs belt the city like a huge chain from the Battery to Harlem. . . They have their 'club rooms' where they meet, generally in a tenement, sometimes under a pier or a dump, to carouse, play cards and plan their raids. . . The fiction of a social 'club', which most of the gangs keep up, helps them to a pretext for blackmailing the politicians and the storekeepers in their bailiwick at the annual sessions of their picnic or ball" (64, p. 217-230). Speaking of Boston, Robert A. Woods wrote in 1898: "Almost every boy in the tenement-house quarters of the district is a member of a gang. The boy who does not belong to one is not only the exception, but the very rare exception. There are certain characteristics in the make-up and life of all gangs. To begin with, every gang has a 'corner' where its members meet. This 'hang out,' as it is sometimes called, may be in the centre of the block, but still the gang speak of it as the 'corner'. The size of the gang varies; it may number five or forty. As a rule, all the boys composing it come from the immediate vicinity of the corner. Every gang has one or two leaders; and of course its character depends very much upon the leaders, for as one of the boys expressed it the leader says '"Come"' and the push move' . . Nightly after supper the boys drift to their corner, not by appointment, but naturally. Then ensue idle talk, 'jawing matches,' as one boy expressed it, rough jokes, and horse-play. . . I am referring now more particularly to boys over fourteen years old. . . About thirty young men belonging to one of the gangs I know, meet every Sunday afternoon at their corner. Of this number, fully half are fellows who live in the highlands, at the edge of Roxbury. I know a boy in High School—he will graduate next year—who moved to Dorchester, but comes regularly to the old corner on Sunday afternoon. No new friends can supplant the gang. . . It is interesting to know what becomes of these various gangs when the boys get to be seventeen or eighteen years old. The more respectable gangs, as a rule, club together and hire a room. The more vicious prefer to use what little money they have in carousing" (87, p. 114-118). From her Chicago experience Jane Addams says, in the same words Mr. Woods uses: "the boy in the tenement house region who does not belong to the gang is not only the exception, but a very rare exception" (1, p. 176).

Chap. II. The Boys' and Girls' Club

Henry D. Sheldon made a comprehensive study of the institutional activities of American children (67). According to the data gathered from 2,508 papers of value written as a classroom exercise, received from children of the ages 8 to 17, from 5 localities, East and West, rural and metropolitan, 68% were or had been members of clubs. Many of these were of adult formation, leaving 1,166 purely spontaneous children's organizations. An attempt was made to divide the societies into groups on the basis of their activities, with a separate group for those having secret elements. The figures are presented in a chart. For the purpose of making a comparative study these figures have been worked over and are shown in the accompanying table. For each age from 8 to 17 are shown the number of papers collected, the number of spontaneously formed societies, the number of societies described in the papers which were formed by adults for children, the percentage of those belonging to spontaneous and adult formed societies. In order to compare the activities at the different ages their relative importance among spontaneously formed clubs has been worked out in percentages. The groups Sheldon made are entitled: secret, predatory, athletic, social, industrial, philanthropic, and in one group literary, art, and musical societies.

TABLE I.

Age	8	9	10	11	12	13	14	15	16	17	Total.
No of papers collected	103	145	246	356	407	429	269	250	74	29	2181
No. of societies formed by adults	34	44	76	97	111	142	60	52	16	2	623
“ “ “ “ “ “ for girls	20	25	44	56	66	73	40	32	9	2	384
“ “ “ “ “ “ “ boys	14	19	32	41	45	69	20	20	7	0	257
Per cent. belonging to Socs. formed by adults	33	30	31	27	27	33	22	21	22	7	29
“ “ “ among girls	38	32	37	33	33	35	27	31	30	13	34
“ “ “ “ boys	23	28	25	22	21	31	10	21	16	0	22
No. of spontaneously formed clubs	29	53	137	191	240	219	150	100	56	21	1196
“ “ “ “ “ among girls	15	28	51	77	121	100	80	40	29	10	551
“ “ “ “ “ “ boys	14	25	86	114	119	119	70	60	27	11	645
Per cent. belonging to spontaneous clubs	28	37	56	56	59	56	56	40	76	72	52
“ “ “ “ “ “ of girls	28	34	43	46	60	49	53	38	99	62	48
“ “ “ “ “ “ “ boys	28	37	68	60	52	54	59	63	61	84	55
“ “ of spontaneous clubs, having secrets	10	9	11	6	8	6	8	6	9	0	7
“ “ “ “ “ “ “ of girls	20	18	19	9	15	12	10	7	14	0	12
“ “ “ “ “ “ “ “ boys	0	0	6	4	3	2	7	5	4	0	4
“ “ “ “ “ predatory	27	13	15	16	10	10	8	10	4	0	11

TABLE I—Continued.

Per cent. of spontaneous clubs, predatory, of girls	27	18	6	0	6	1	1	7	4	0	5
" " " " " " " boys	28	8	19	27	15	19	16	11	4	0	17
" " " " " athletic	27	39	48	37	35	42	40	49	48	24	39
" " " " " " of girls	7	4	8	13	7	15	15	12	33	20	12
" " " " " " " boys	50	80	61	54	63	66	70	73	63	27	63
" " " " " social	0	9	6	13	12	9	13	13	16	14	11
" " " " " " of girls	0	18	15	26	18	15	20	27	24	10	19
" " " " " " " boys	0	0	1	5	7	5	6	3	8	19	4
" " " " " industrial	20	23	20	25	27	20	15	11	11	14	12
" " " " " " of girls	33	36	40	40	44	36	20	22	17	10	34
" " " " " " " boys	7	8	9	15	11	8	9	3	4	18	9
" " " " " philanthropic	4	2	1	1	3	3	5	6	2	0	3
" " " " " " of girls	0	4	0	3	3	6	6	12	0	0	4
" " " " " " " boys	7	0	1	0	4	1	3	2	4	0	2
" " " " " literary, art or musical	0	2	1	4	4	4	13	12	23	52	8
" " " " " " of girls	0	4	2	7	7	5	19	17	24	60	12
" " " " " " " boys	0	0	0	3	2	4	6	8	19	45	4

At the age of 8, with which the investigation began, the percentage of those answering who belonged to spontaneously formed clubs was 28. As the returns received were class room exercises given to all the pupils in the grades investigated, 2,906 in number, these figures may be taken as representing approximately the proportion of such school children belonging to clubs. Of this large number only 224 did not write; of the returns received 398 were defective in some details though they all described clubs. The height of the curve of membership is reached at 12 when over half of the pupils belonged to clubs. Comparing girls and boys the age of 8 shows both sexes at a level, 28 per cent. The girls' curve reaches its apex of 60 at 12 years, the boys' curve rises to 68 at 10 and then diminishes. In all cases the figures for the ages of 16 and 17 are so few as to invalidate them. Of the girls 48% belonged to clubs of their own formation; for the boys the figure is 55%. Certainly Puffer (61, p. 178) and Forbush (27, p. 314; 26, p. 44) are unintentionally misinterpreting the facts when they say that Sheldon's figures show that only 7% of the clubs were formed before 10 and that 11, 12 and 13 are the ages when the largest number of clubs were formed. Sheldon's figures furnish no direct information on the question as to when the clubs were formed nor their duration, though they suggest that they were formed much earlier than Forbush and Puffer say. The years when they were most prevalent are from 10 to 14.

Despite the instructions that none but spontaneously formed clubs be described 623 clubs formed by adults for children were written up. The curve of relation between the number of these and the total number of papers collected shows a percentage at 8 years of 33. Except for a rise again to 33 at 13 there is a general decline with age. Girls outnumber boys in the ratio of 34:22 in these societies.

A consideration of the activities of these clubs shows that secret organizations which constitute 7% of the clubs are slightly more popular in the earlier years, and that they are predominantly found among girls. These were, Sheldon says, mostly social or 'good time' clubs, though other types of clubs also had secret features. A better classification would have counted these also under the separate headings. The curve for predatory activities begins at 17% and gradually diminishes. With 8 and 9 year old girls it is as prominent as with boys; after that it drops rapidly. The curve for boys continues to be high until 15. The term predatory however is given a very loose meaning. A better term for what is meant would be unorganized play as contrasted with athletics, *i. e.*, the plays carried on without rules and being unruly. For organized games or athletics the curve rises from 27% at 8, to 48 at 10, drops to 35, at 12, and then rises to 49, at 15. This is dominantly the boy's type. Though it rises to 15 from 7 with girls, it continues to be but a minority choice throughout. The girls' popular choice consists of those activities which Sheldon groups together as industrial occupations, sewing, giving shows, playing store and collecting. This curve rises from 33 to 44, then drops to 10. With boys it starts at 7%, reaches 15 at 11 years, and then drops. Philanthropic organizations, which constitute 3% of the spontaneous clubs, consist in his study of 2 types, those whose chief object is to help other people and those formed for mutual help against such vices as swearing, using slang, smoking and the like. The group of social clubs constitutes 11% of the whole. This is dominantly a girl's club, with whom it varies from 15 to 27% after its appearance at 9 years. Only the philanthropic clubs have a lower standing in relative importance with boys, social clubs being on a par with secret clubs, literary, art and musical organizations. This last group is the latest to appear. At 11 years it reaches 4% and until 16 never goes higher than 13%. Boys and girls do not organize together.

In addition to the data from children Sheldon collected reminiscences from 453 adults in response to a questionnaire. These he does not tabulate but summarizes and generalizes.

The period before 10 years he characterizes as the stage of imitation. At this time the play mimics the occupations of adults whom they see, hear or read about. The second period, from 10 to 14, he calls the period of invention and the following of instinct. We shall defer interpretation till the second section of the paper. It must be said in passing, however, that the cases cited as illustrations of this new element of invention and instinct include a case of a Jesse James gang, a typical gang with a club house and an Indian club. The cases he cites do not support the thesis of the appearance of invention at this age.

The quotation above from Mr. Woods ended with the statement that the more respectable gangs form clubs. His description of them particularly emphasizes their rôle in politics. There are 8 of these young men's clubs in his district of Boston. In New York they are much more numerous and similar conditions exist in other cities. One of the chief undertakings of these 'social pleasure' clubs, as they are generally called, is the management of an annual ball held in one of the public dance halls. During the winter months in Tammany Hall, Arlington Hall, Clinton Hall and the hundreds of other dance halls in New York several 'Full Dress and Civic,' Mask Balls, or 'Barn Dances' per week are held by these social clubs, so numerous are they. One club whose meetings and dances the writer has attended held two 'annual balls' the same year. Picnics are held in the summer. Most of the members of these are wage earners and unmarried. They hire a parlor floor, sometimes also a basement where they hold dances for members and their friends only. Nearly all of them have back rooms where gambling may be carried on undisturbed by the police. Here the unemployed members may find a loafing place. In the evening the members gather informally with their tobacco and beer for a general good time, singing, clog-dancing, cards and story-telling.

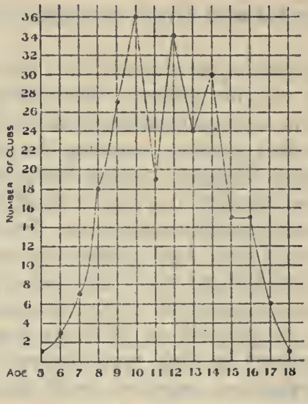
It is but a step from this the 'social' club to the 'benevolent' society, the additional element being that each members pays weekly dues or 'benefits' to sick members. These are not to be confused with the great fraternal organizations existing throughout the country, but a certain relationship is evident. These clubs formed by boys in their teens grow into the adult organizations to be treated in the following chapter. To show the similarity reference may be made here to the clubs of thieves and pickpockets which are started by adolescents. Very frequently the police trace stolen goods to the club rooms of a gang of thieves. Pickpockets also have organizations of this character. A short time ago a smart fellow caught one of this gang picking his pocket and held the man's hand in his own pocket. He was about to turn the man over to the police with the proof, whereupon the pickpocket begged for mercy and promised that our friend should never be picked again. Moreover he promised that if at any time Mr. X should need any assistance he would get it by visiting the club, and when released the pickpocket invited his intended victim down to the club rooms on a certain night. At the appointed time our friend called on the pickpockets and received a royal welcome.

As illustrating the wide spread character of these social clubs the experience of the evening recreation centres in the New York Public Schools is enlightening. In the year 1899 the public schools were opened in the evening, with paid instructors in charge, for general recreative purposes. The last report of the city superintendent (51) gives statistics of 744 clubs which have come into the schools from outside because here is provided a warm and lighted meeting place. The settlement houses have the same experience constantly. To some extent no doubt the formation of clubs out of unorganized gangs of the street corners has been stimulated by this provision of attractive meeting places and the additional incentives of gymnasium, baths and other advantages, especially the privilege of special rates at summer camps, but this stimulation is in itself inadequate to explain the existence of the spontaneously formed clubs, as some social workers have maintained.

The athletic club is an institution of great significance among the boys of the cities. Such organizations as the Irish-American, the Crescent and others will be treated under the heading of adult clubs. Among boys and young men small athletic clubs flourish particularly abundantly during the summer, as the advertising columns of the evening papers well show. A single edition of the Evening Journal will contain advertisments for ball games by scores of teams. A typical notice is the following: "The Alco A. C. (uniformed) desires to schedule games with 15 yr. teams for Sunday afternoons in July, to be played at Pelham Bay Park." Several of the papers conduct in this way an extensive engagement bureau. The recreation centres and playgrounds furnish the opportunity for competitive contests in basketball, gymnasium and track events as well as baseball.

Because of the fact that no data except that furnished by Sheldon has been published regarding girls' spontaneously formed clubs, the writer has made a special study of this type of organization. Through Prof. W. S. Monroe reminiscences were obtained from 189 girls in the State Normal School at Montclair, N. J. Prof. Monroe asked the members of his psychology classes to write an account of the clubs they had been instrumental in forming, the organizations which were spontaneously formed by the girls themselves and independent of adult interference. They were asked to tell the number of members and their age, the duration and the ostensible purpose of the clubs, to state the basis of membership, and whether or not there were any secret characteristics. Of the girls in these classes only 17, or 9% of the whole number, had not been members of some spontaneously formed club. Some had belonged to more than 1, the 172 girls reporting and describing 261 clubs.

The curve of age for the formation of clubs covers the span from the fifth to the eighteenth years. The one case of a 5 year old girl was exceptional; they wanted to exclude all under 7 but her sister's influence got her in. Of the 236 cases where age was stated the medium was 12, the average 11.9. The curve shows that the period when the formation of clubs was most frequent was 9 to 14. In 6 cases the age was given as being 8 to 9. If we count these as being under 9 we have 32 cases of clubs formed before 9, or 13% of the total. Only 37, or 16%, were formed after the age of 14. Of the total number 218 report the duration, or length of time of existence. This varies from 1 hour to 5 years, and in 7 cases the clubs



Age of Girls when they formed Clubs.

still exist. The average duration is 9.7 months. 209 report membership. This varies from 3 to 50. The average is 8.1.

The ostensible purpose of these clubs was declared to be dominantly social or for a good time in 111 cases; in 3 others this is a subordinate motive. Sewing is the chief motive in 31 clubs, and a subordinate motive in 31 others. 21 clubs are dramatic, 4 subordinately so; 13 are declared to be dominantly philanthropic and 19 have this as an incidental motive; 14 are dominantly literary, 4 subordinately literary; secrecy is the sole motive in 18 cases and in 6 cases it is a subordinate motive; 4 are for spite; 10 clubs are athletic; 3 are card clubs; 3 have a religious motive; in 2 cases each the chief purpose is exploring, music, languages, and for the protection of animals; in 1 case each, clubs were formed for the study of birds, of algebra, history, large cities, and of civics, and 1 was a postal club, 1 an Indian club, 1 for self-improvement; 2 had as a subordinate purpose the elimination of slang among the members. Adding the dominant and subordinant purpose and figuring the percentages we obtain the following table:

Purpose	Social	Sewing	Philan.	Literary	Dramatic	Secrecy	Athletic	Spite
No.	114	62	32	28	25	24	10	4
%	35.3	19.2	9.9	8.7	7.7	7.4	7.4	1.2

Purpose	Cards	Relig.	Explor	Music	Language	Animal	Slang	Birds
No.	3	3	2	2	2	2	2	1
%	0.9	0.9	0.6	0.6	0.6	0.6	0.6	0.3

Purpose	Algebra	Hist.	Cities	Civics	Postal	Indian	Self-Imp.	
No.	1	1	1	1	1	1	1	
%	0.3	0.3	0.3	0.3	0.3	0.3	0.3	

Of these clubs 80 or 36.5% are secret.

In most cases these clubs are but incidents in the group life of girls already united by friendship and the play activities. This is particularly evident in cases where the same group forms numerous clubs, one succeeding another. One girl writes: "We children were very fond of forming secret clubs and had several at different times. Sometimes I or my sister belonged to two different ones at a time." Another girl reports 5 different clubs. In such cases the club is not the cause of the group formation but incidental to its activity. In other cases, of which the following is a good example, the club is the principal bond of union. "Last spring I organized a club. I wrote to my girl friends inviting them to my house to discuss plans for forming a club, the object of which was to do something to aid the Fresh Air Fund which sends poor children to the country in the summer. The girls were very enthusiastic over the idea and each girl agreed to bring in at least one member. The members were all between the ages of sixteen and twenty and were good workers. After four meetings which were held at my house the club was organized and we decided on different ways to make money." Although these girls were friends they were not constantly together in their activities. The club was extra-incidental and not incidental to their life. In the great majority of cases, 231 in fact, the descriptions show that the clubs were incidental to the play activity; in the smaller group of 30 cases the activity was extra-incidental. Of these 30, 2 were under adult leadership, the only ones in the whole study which were. The medium age of the formation of these groups was 15. Only 8 were under 14; none were under 11. The duration of these clubs varied from 3 months to 8 years. The medium duration was 2 years, the average 25.6 months. The membership varied from 4 to 120, with a medium at 14 and an average of 20, with an average deviation of 13. The primary purposes were in 9 cases social; in 3 cases each athletic, sewing, literary, musical and religious; in 2 cases each for study of languages and for card-playing, and 1 case each of clubs formed for dancing, dramatics, philanthropy, and the study of algebra and of history. Secondary purposes of philanthropy in 3 cases, literary activity in 3 cases, social in 1 case and sewing in 1 case were present. 9 of them were secret.

As another form of approach to the question the clubs were divided into 3 groups according to age, the 32 clubs of girls under 9 forming the first, or group A, the group of 170 formed by girls between and 9 and 14 inclusive constituting group B, and the 37 cases of clubs over 14 making group C.

A. The duration of the clubs in group A varied from 1 week to 3 years. The medium duration was 8 months, the average 9.3 months with an a. d. of 8. 1. The membership varied from 3 to 12. Of the 26 cases where membership was stated the medium was 5, the average 5.5 with an a. d. of 1. 4. One of the largest clubs had 2 boys as members. The following is the order of prominence of the purposes: good time, sewing, dramatic productions, philanthrophy, athletics, spite, exploring, literary and musical occupations and bird study. Of this group 12 had secret elements.

As an example of the type of club most common among these young girls the following may be quoted:

"When we were about 7 years of age we formed a club called the 'Dramatic Seven.' As the name implies the club was formed for the purpose of having little 'plays.' After we had given one play we changed the names to the 'Merry Seven' and gave parties. Originally there were 7 members, all close friends to each other. As we became acquainted with other children we allowed them to join if we liked them very much. We had a peculiar password, 'two drops.' These words were selected because when joining, each member had to go through an initiation ceremony, which consisted in having two drops of salt water dropped on the tongue through a medicine dropper. The club lasted about a year." Other characteristic features are added by this account: "When some of my friends and I were on an average of 8 years old we formed a little sewing club which met Saturday afternoons. This little club, of which we were very proud, was organized for a twofold purpose. First we sewed and embroidered clothes for our dolls, and secondly we had little outings during the vacation time from the money in the treasury. The dues were three cents per week a member, and every Saturday we met at a different member's house. One of the chief and most important things to me was the little spreads which were served after the meetings, by the mother at whose house we held our meetings. As far back as I can recollect we had 6 members, all girls, who were the organizers. No boys were allowed to join our club. We had no password or held no initiation ceremony. Having no satisfactory candidates, and two of our members having moved, our little club broke up after having existed two years."

B. Group B is the largest, including 170 cases. Duration was stated in 155 cases. The medium was 5 months, the average 9.27, with an a. d. of 9.08. The number of members in 152 cases had a medium of 8, an average of 7.7 with an a. d. of 3. 4. These clubs were in half the cases for a good time. The other purposes were found to rank as follows: sewing, 50; philanthropic, 29; dramatic 18; secrecy, 17; literary, 13, athletic, 4; religious, 2; for the protection of animals, 2; and 1 case each for the study of large cities, and for history, to play Indian, and for self-improvement. Secret elements were present in 53 cases.

An illustration of the social club of 14 year old girls is well represented by this report:

"About four years ago three of my girl friends and I formed a small club. We named it the Weathervane and each of us represented a wind, one north, one east, one south and one west. It was an exclusive organization and though we contemplated admitting four members to make northeast, etc., we never did. I was at the time about fourteen years old. Our only purpose in forming it was to have a good time. We met on Friday evenings and always made candy. Sometimes we played games also. Our dues were five cents a week, and they were used only to have a good time. The club lasted for about two years when it was broken up because one of the members went to Europe. During the time it lasted we had one party to which only four were invited. We went on little picnics, but only by ourselves. It was not a secret society so we had no password but we had what we called a club call. It was 'North, south, east or west, which one do you like the best!' We also had a club song which one of the girls composed. Our colors were green and gold and to this day we are all loyal to them. We were going to get club pins but the club broke up before we could decide on them. We kept a book in which the secretary always wrote up the minutes of each meeting. We had election of officers about once every two or three months. Of course each member was an officer."

The following pictures the typical sewing society:

"At the age of eleven another girl and I organized a little club for the purpose of making Xmas presents as well as for pleasure. The club consisted of only eight members and no other person was allowed to join. We called ourselves the 'Sewing Club' and wore black and orange rosettes in order to make people ask questions. We met at each person's house, sewed, had little refreshments and had a general good time. We met once a month. The society only lasted about four or five months. I remember I was secretary of the organization."

This portrays a dramatic club:

"At the age of thirteen I with five other companions about the same age formed a club which we called the 'Dramatic Club.' We would read all the children's stories we could get and then attempted to stage those which we thought were best suited for the purpose. New members were taken in according to what was needed in the cast, and only those were admitted who we thought had the ability. It was not a secret organization and we had no password. The club lasted for one summer and disbanded when school began."

A typical club with philanthropic motivation is thus described:

"When I was about twelve years old I belonged to a secret society called the S. B. C. The club was formed to make scrap-books for a hospital, which the sister of one of the members was interested in. Two of us formed the club and we chose three other girls whom we asked to join. This made five of us and no one else could join. We had neither password nor ritual. The club lasted about a year or perhaps a little longer."

What we have called a literary club includes such as this:

"One voluntary organization to which I belonged when about thirteen was a reading club. A list of good books was arranged, each of which was read before the club by each member in turn and then discussed. Our object was to read good books and become acquainted with the life of the authors. New members were freely taken in until we had twelve; that was the final number. We continued our club for nearly a year. All proceedings were kept secret."

C. Of the 37 clubs formed by girls over 14 years of age, 7 were still in existence at time of writing. The reporters being juniors and seniors in normal school may be judged to be at least 18. Figuring on the length of time these clubs have actually existed to date of reporting, the medium duration in months is 12, the average 20.3 with an a. d. of 12.1. This is figured from the 31 cases reporting duration. The membership varied from 5 to 40; the medium was 10, the average 12.6, with an a. d. of 6.7. Here also there were 31 cases. These were mostly social clubs. The other purposes in order of importance were dramatic, literary, athletic, for the study of a foreign language, card-playing, sewing, religion, philanthropy, music, algebra, civics, saving of postal cards and the elimination of slang. 8 of these were secret.

A comparison of the 3 groups shows that the duration of the clubs in groups A and B was very nearly the same. For group A it was 9.3 with an a. d. of 8.8; for group B it was 9.27 with an a. d. of 9.08. Group C however shows a great increase, the duration here being 20.3 with an a. d. of 12.1. The membership shows a slight increase with age, the figures in the 3 cases being 5. 5, 7.7, and 12.6. A comparison of the purposes and activities shows that the motive of social pleasure occupies approximately the same prominence in each. Sewing occupies the same position in A and B but it drops considerably in C. The dramatic motive appears in nearly the same proportion of cases in each period. Of the 32 instances in which the philanthropic motive appears all but 6 are in clubs under 13; *i. e.*, 55% of the cases being under 13 have 81% of the cases of philanthropic motivation. The literary motive remains of the same prominence in the 3 groups. The athletic purpose which is insignificant, evident in but 7 cases, appears at 10 and over. The motive of secrecy appears as a dominant one in 16 clubs and as a concomitant or subordinate one in 10 others. Moreover 82 have some secret characteristics. The ages when secrecy is a motive for forming clubs is from 8 to 14. In one case no age was given. Of the 25 others, 18 or 72% were under 11 years of age, while only 21.4% of all the clubs were under 11. All were under 15; half of them were at 9 and 10. Of those clubs having some secret elements the age was given in all but 2. There were 31 under 11; *i. e.*, 38.8%. This illustrates the kind of club in which the purpose is secrecy:

> "When I was ten years of age six little girl friends and myself formed a secret club, which we called W. N. T., meaning—we never tell. The club was of the most secret character; everything was whispered in order to make it more mysterious. We had no passward but always spoke to each other in 'hog Latin.' The membership of the club was most exclusive since we took in only those whom we especially liked and who would let us run things the way we wished. The only object we had in forming the club was to keep certain other children whom we knew guess-

ing when we spoke in whispers. The club lasted for about six months. One of the exclusive members told the name of the club and this was the cause of its finally being dissolved." To represent the sort of club meant when we say that it had some secret elements though not formed for the purpose of secrecy as the above, the following may be quoted: "I belonged to a club of sixteen girls and boys. The object was to give performances. Our meetings were secret and our password was 'Bobkin.' We used to give little plays only for our own amusement and nobody outside ever came. . . . This club lasted one summer.

The athletic clubs were evenly distributed through the different ages. The 4 'spite' clubs were under 12.5 years. Those formed for playing cards, for studying history, language, civics and algebra were formed after 14, as was the 1 for self-improvement. The kindness to animals motive appeared under 13, as did the 3 formed for bird-study, the study of cities and for playing Indian. The religious motive appeared at 11, 12 and 17. Self-improvement appeared in 1 case, at 14.

As to frequency of meeting, 103 furnish data. Of these, 3 do not furnish the age of members. In 10 cases meetings were more frequent than once a week; in 63 they were once a week, and in 24 less than once a week. Of those meeting more frequently than once a week all but 3 are under 12 years in age; all but 3 of those meeting less frequently than once a week are over 11; all are 10 or over.

Data was furnished for 115 clubs as to the basis of membership. In 42 cases the membership qualification was just the fact of being playmates or neighbors; 37 were described as cliques; the basis was attendance at a certain school or membership in a certain class in 12 cases; in 12, new members were voted into the club, in 1 case by majority, in 7 by unanimous vote, and in the others the statement merely was that new members were voted on; in 9 a literary or musical test was given; in 1 the qualification was the possession of pretty clothes; in 2 cases the club was declared to be open. Grouping all those whom we may be reasonably sure were exclusive, *i. e.*, the cliques and those admitting only by unanimous vote and the 1 having the qualification of dress, the total amounts to 45, or 39%. of the whole. Comparing the number of cases of clique organization for each age with the total number of clubs at that age, the following percentages are obtained, corresponding respectively to the ages 7 to 18: 14, 19, 13, 11, 10, 16, 27, 27, 33, 20, 33, 100. Although a rise is evident in the frequency of cliques at 13, the difference between the earlier and later years is not very remarkable. The last figure, it is to be observed, is for the only club formed at that age.

From a section of the country entirely isolated from that whence these normal school girls came have been obtained data of a similar nature. Miss Clare Lyon, Principal of the Lidgerwood, N. Dak., High School, asked the members of her English classes to describe what clubs, if any, they had ever been members of. The instructions were similar to those Prof. Monroe gave. There were 27 members in the Senior and Junior classes, of whom 23 were taking English, 18 girls and 5 boys. All but 2 of these had belonged to some sort of club or 'bunch,' but 9 of these show adult leadership. The others, 9 girls and 3 boys described spontaneously formed clubs. Out of 18 girls, therefore, 50% had been members of spontaneously formed clubs, The ages at the time of formation varied from 9 to 14, the number of members from 4 to 15, with an average of 6. The average duration was 7 months. The purpose of organization was predominantly for a good time, lesser in importance being the purposes of sewing, card playing, reading, dramatic productions and philanthropy. One question asked was their preference: to have a chum or to belong to a club. Replies were received from 11, 9 of whom preferred to belong to a club; 2 preferred having a chum. The fact was disclosed that there was no conflict between the two sorts of relationship however. The typical situation may be described thus in the words of one of the girls: "Here in this town I have belonged for quite a while to what is known as the 'Bunch,' and besides have always had one particular girl as my chum." From various sections of the country have been gathered other data of a confirmatory nature but of too disconnected a character to be classified.

It will be well here to summarize the facts thus far presented regarding boys' and girls' group activities. At the age of 5 or 6 children get together in their play. These groups are roughly organized and they participate in unco-operative and unorganized games which gradually shape themselves into definite games with rules, this germinating period lasting until puberty. This gang activity may continue until maturity unless the group is organized into a club. The club makes its appearance as early as 7 or 8, both with boys and girls. Of the spontaneously formed clubs reported by Sheldon 45% were of girls. Of the girls in Prof. Monroe's classes 91% had been members of clubs. In a personal letter from Miss C. I. MacColl, of Christodora House, a settlement on the lower east side of New York, the statement is made that "girls in our neighborhood group as do the boys. In the past three months I have had applications from fifteen different groups of girls from fourteen to twenty years of age wishing to come to Christodora as organized clubs." The ages when clubs were most frequently found among boys were 10 to 14; this corresponds with the time when they are most often formed among girls. After that age they do not cease to be members of clubs but they usually join organizations which they find already in existence, the permanent adult or student clubs. The number in the gang averages 9 or 10. We have no figures on the size of the boys' club, but as the gang organizes itself into the club we may infer that the two are the same size. The girls' clubs were found to average 8 members, they increase in size with age, the adolescent clubs having an average of 12. In external formation, then, boys' and girls' clubs are very similar. The difference between them is in their activities and purposes. This correlates closely with the fact that clubs formed before the age of 13 or 14 are but incidental to the regular group activity. Nine tenths of the clubs reported by the normal school girls were of this character. Boys' clubs spend their time mostly in physical activity; girls have clubs for sewing, dramatic productions, tea parties and social good times. Girls say that they form clubs for a good time; boys say that they are for baseball, which is saying the same thing since boys play ball for a good time. The activities of either sex could be carried on without the club. In girls the exclusive clique spirit is stronger than in boys. Secrecy is prominent among girls under 11 years; it is not so strong among boys. After the age of 14, clubs appear which are not mere incidents in the play life; a new basis of membership is introduced.

Chap. III. Student Societies

Student life offers a volume of material for the study of social psychology that has scarcely been opened. Nowhere can the psychology of later adolescence be more profitably studied than in the group life of students. Pres. Hall says: "Student life is perhaps the best of all fields, unworked though it be, for studying the natural history of adolescence. Its modern record is over eight hundred years old and is marked with the signature of every age, yet its essential features do not vary" (35, p. 399). The 17 pages following this statement in "Adolescence" summarizes a great many of the facts of these student societies from the nations of Bologna and Paris to the modern college fraternity. It is necessary for us in this study, so far as the presentation of data is concerned, to confine ourselves to present-day American societies. First to be considered are the societies of the preparatory and high schools.

The first fact to be observed is that the conditions prevailing in the public high schools are very different from those found to exist in private boarding schools or the preparatory departments of colleges. In the latter case the organizations among the students approximate quite closely those in the college. The group organizations chronically present in the high school are the class, the literary and debating society, the athletic association, the glee club and orchestra, and less frequently mandolin, dramatic, art, camera, craft and science clubs, publication boards and fraternities. Generally the classes organize in a rather loose way and for special occasions, for the furtherance of class and school interests. In some cases only the senior class thus organizes with officers and committees and perhaps a constitution, for the purpose of managing the commencement affairs. Besides the clubs distinctly of high school students smaller group organizations are formed, as was shown in the preceding chapter. These are not characteristic of the high school but of that period of adolescence. The literary and musical societies, except in the larger places, are as a rule under the directing hand, if not propelled by one of the instructors. The athletic clubs, at least among boys, are more truly spontaneous. In this case, however, the faculty have usually found it advisable to associate themselves in an advisory capacity and often as financial managers.

The last twenty years has witnessed the formation of secret fraternities in the high school. As to their prevalence at present it is only possible to approximate as there are no figures. Baird merely says: "They are numerous, but have, except in a very few instances, little elements of stability, and in fact are imitations of the mere externals of the college fraternity system without really grasping or living up to its principles of brotherhood and mutual helpfulness" (6, p. V). The difficulty of determining their prevalence is because first, in but half the cases are they national organizations, and second because of the circumstance that, on account of the opposition to them on the part of the school authorities, secrecy is a means of protection. The report in November, 1904, of a committee appointed by Pres. Harper gives the best idea of their prevalence in the Middle West. Questionnaires were sent to 464 schools; replies were received from 306; of these "about 170 had no fraternities" (73, p. 3). Complete answers were received from only 19 private and 71 public schools. The private schools, having an enrollment of 2,207, had a fraternity membership of 796 or 36.06 %. The 71 public schools, enrolling 54,827 had a fraternity membership of 4,523 or 8.35%. The number of fraternities per high school varied from 1 to 6; in many schools there was but 1 sorority. Two exceptional cases were noted; the San Francisco Girls' High School had 7 sororities; The Central High School of Toledo, O., had 9 fraternities and 5 sororities. The average fraternity membership was found to be 30 whether the school contained 100 or 1,500 pupils. The only difference is that in the larger schools there are more fraternities (73). A couple years earlier

Gilbert B. Morrison sent out inquiries to 200 high school principals in the largest cities of the country. Answers were received from 185; of these 87 reported experience with fraternities, and 98 reported having had no experience (55). The conditions in New England in 1904 were reported by a committee of which C. T. C. Whitcomb was chairman. He received replies from 244 out of 301 requests for information sent to towns in New England and to a number of large cities throughout the country. Fraternities were reported as existing in 72 schools (86). A committee of the Y. M. C. A. sent out a few questionnaires in 1908. They received replies from 48 high schools in Massachusetts and Rhode Island. Of these 15 have fraternities; 33 have not. The average membership in these societies is 26 (89). All of these reports record the opposition to the fraternity in the high school. Indiana, Kansas and Minnesota by legislative acts in 1907 sought to abolish them. These papers name 22 cities that legislated against the fraternity.

College societies are more familiarly known. As Sheldon pointed out in his book on college societies, where the elective system has been introduced, it destroyed the autonomy of the class, which had until about 1880 been an important factor in the social life of the American college (68, p. 196). In the smaller colleges the class organization is still quite strong. Through the machinery of its constitution, officers, and committees it conducts 'proms,' banquets, parties, the year-book, dramatics, etc., and crystallizes a class spirit which vents itself in the inter-class athletic and debating contest and develops a subtle loyalty to 'noughty-several.' To enumerate the different kinds of organizations which students form would be to duplicate every type of adult club and then add a good many others such as students only form.

Michigan University has a total of 176 student organizations including 20 fraternities in the literary department, 13 in the professional schools, 9 sororities, each having its own house, 10 sectional clubs, 6 literary and debating societies, 6 musical clubs, dramatic, athletic, military, honor societies, class organizations, press and publishments, and general university clubs, such as medical, socialist, woman's suffrage and Christian associations. Wisconsin University has 130 such organizations (71, pp. 208, 228).

A few of these types of club deserve special attention. The last edition of Baird's handbook on secret fraternities (6) issued in 1905 names 31 general chapters for men, 17 for women, 50 professional fraternities, (about 10% of whose membership is duplicated in the general fraternities) and local fraternities to the number of 70 for men and 47 for women, with a total membership of 242,501. The World Almanac of 1911 (88) gives larger numbers in each case, the total being 329,417. It is evident that this number includes alumni, as the total student body in universities, colleges and technical schools in the United States is only 289,204 (88) and that in Canadian schools is only 10,000. Besides the secret fraternities, there are general honorary societies bearing Greek letter names. All are copies of Phi Beta Kappa which now has a membership of 15,000. The peculiar features of the college fraternity are: (1) their residential character; they provide a substitute for the home atmosphere by furnishing a house exclusively for the residence of the society members; (2) their secret features; (3) the extreme care taken to choose members of congenial interests.

Religious organizations are found in all colleges. That of widest extent is the Y. M. C. A., which numbers 758 organizations with a membership of about 60,000. The eastern schools have other religious societies and denominational clubs. Athletic associations, to which the greatest part of the students belong, are universal. Their purpose is to furnish financial and moral support for the teams. Lack of space forbids further details as to student organizations. Pres. Hall, in one of his remarkable sentences of 20 lines, summarizes the different kinds of clubs found in colleges (35, p. 416).

Chap. IV. Adults Clubs

Much valuable data would be provided for sociological as well as for psychological interpretation of the club were we to trace the history of its development. As student life is the great laboratory for the study of later adolescent social nature, so the club life of adults reveals the working of the social processes of maturity. The difficulty of this task is that there can be found no beginning until the earliest human life is unearthed and laid out for inspection, and even then we would be referred to higher animal life. All that the limits of this thesis will permit is an outline sketch of the growth of the club in America, with a presentation of the main facts regarding the most prominent representatives of the types now existing.

In 1800 there were but few clubs in this country. Freemasonry had been introduced from England between 1723 and 1740. In 1743 the American Philosophical Society was formed. In 1764-5 the Sons of Liberty, a secret political organization, was founded. The New York Chamber of Commerce, the first prominent representative of the business club, was organized in 1768. The date of the Phi Beta Kappa was 1776. The Pennsylvania Prison Society, 1787, the Massachusetts Historical Society, 1791, and the Connecticut Academy of Arts and Sciences completed the list of important learned societies. The officers of the disbanding army formed the Society of the Cincinnati in 1783. As a corresponding and rival society was formed the Society of Tammany in 1789. The first woman's club on record was the Female Society for Relief and Employment of the Poor, Philadelphia, 1798. In the next 30 years the growth was not very rapid. The principal organizations of this period were the following: The New York Society of Journeymen Shipwrights, 1803, had some of the characteristics of the labor union. The American Board of Commissioners for Foreign Missions, 1810, started the great missionary movement. The Society of Red Men, 1813, developed out of the Sons of Liberty. Odd-Fellowship was introduced from England in 1819. 1826 was the birth year of the National Academy of Design and the Society of the War of 1812.

The period from 1830 to the Civil War saw the birth of many reform movements which worked through clubs. Women now make their influence felt as never before in history. Labor unions sprang up, and political clubs were numerous. They had no small influence in crystallizing action in support of the principles that rent the union. The leading women's organizations of this period were the Ladies' Association for Education of Females, Jacksonville, Ill., 1833; the Female Anti-Slavery Society and Home for the Friendless, 1834; the Daughters of Temperance, 1840-50; the National Woman's Rights Society, Nauvoo, Ill., 1842; the Ladies' Physiological Institute of Boston, 1848, and the Woman's Equal Rights Union, Seneca Falls, N. Y., 1848. Many local labor unions were organized, and the first national union, The International Typographical Union, 1850. Other unions of more than local importance were the New England Workingmen's Association, the New England Protective Union, and the Industrial Congress of the United States, all formed in 1855. The National Education Association was started in 1857. Several secret societies of a fraternal nature were organized and two were introduced from England,—the Ancient Order of Foresters, 1832, and the Ancient Order of Druids in 1839. In 1842 the Sons of Temperance and in 1843 B'nai B'ruth, a Jewish secret society, were organized. There were over forty learned societies formed during the period, principal among them being the American Association for the Advancement of Science, 1857. There were several important political societies of short duration.

By far the great majority of societies existing to-day have been formed since the Civil War. The fraternal insurance society movement may be said to have been begun by the Ancient Order of United Workmen, in 1868. Since that date have been formed over 600 on a similar pattern (54). The same year was the birth year of the 'woman's club' movement, starting with Sorosis of New York and the New England Woman's Club of Boston. In 1868 the National Labor Union, formed two years earlier, reached an aggregate membership of 640,000. Though it declined, its task was taken up by the Knights of Labor, founded in 1869; its aggregate membership was 702,924 in 1888 (40, p. 379). This organization in turn lost power and the American Federation of Labor, 1881, took up the mantle. The scientific societies as well began their modern epoch after the war. The great organization of farmers began in 1867 when the National Grange of the Patrons of Husbandry was founded. The growth of societies has continued constantly, each year adding a greater number of new organizations. Meyer says that of the 568 fraternal orders, the date of whose organization could be obtained, 78 only were formed before 1880, 124 between 1880 and 1890, 136 between 1890 and 1895, and 230 between 1895 and 1900. The number of clubs of all kinds continues to grow by geometrical progression. The Handbook of Learned Societies (16) gives the dates of practically all the learned societies in America, except those in the fields of medicine, agriculture, local bar and teachers' associations, leagues for civic improvement, charitable organizations and patriotic societies. Detailed data are given for 431 national and local societies of the United

States. Of these 5 were formed in the period 1740-1800; 11, 1800-30; 49, 1830-60; 24, 1860-70; 54,1870-80; 90, 1880-90; 114, 1890-1900; 84, 1900-08.

Considering more specifically the different types of clubs now found in America, we may commence with the fraternal order.

The aggregate membership in secret societies according to the World Almanac (88) is over 11,000,000. This does not constitute one eighth of the population, as might be supposed, because most of these people belong to several societies. The age of admission to membership is as low as 15 in a few, is 16 in a great many and 18 will admit to the majority of fraternal orders. The oldest of these is the Ancient and Honorable Society of Free and Accepted Masons, which has existed in its present form since 1717 (76). Outstripping Freemasonry in membership is the Independent Order of Odd Fellows. It dates from 1739 in England. Two other important societies were imported, the Foresters and the Druids. The Knights of Pythias, the Elks, Knights of Columbus, Order of Good Templars, and the Sons of Templars added to the four above, make up the group of societies which do not have insurance features. Their aggregate size was in 1907 four fifths as large as those having insurance features. This group may be classified as charitable, benevolent, religious or philosophical and mystical.

The majority group of fraternal societies pay sick, death, disability or other benefits. The largest of these is the Modern Woodmen of America, founded in 1884; it now has over 1,000,000 members. The purpose of all these fraternal orders, whether with or without insurance features, is mutual helpfulness. In organization they have the peculiar features introduced by secrecy, ritualism and mystic rites.

As was said above, the 'women's club' movement started in 1868. We use the quotation marks to designate the peculiar meaning attached to this type of woman's society, which Mrs. Harper says women "formed purely for their own recreation and improvement" (75, p. 1043). This does not characterize the woman's movement as a whole, however, and the societies which started with this narrow spirit "widened by degrees into a study of practical matters related to law and economics," so that to-day the General Federation of Women's Clubs, representing a membership of over 500,000, has committees on art, child labor, civics, civil service reform, education, forestry, household economics, industry, legislation, library extension, literature, pure food, reciprocity and other topics. Besides this large federation there are many other organizations of women, only a few of which can be mentioned.

The National and the American Woman's Suffrage Associations were founded in 1869 and united in 1889. The Woman's Christian Temperance Union was founded in 1874 for securing the abolition of the liquor traffic. Its scope of work is so broad as to require 40 departments. Its membership, including children's societies is about half a million. Other societies of national importance constituted entirely of women might be mentioned in almost every field of endeavor. Some of these will be mentioned in the following paragraphs. Fraternal orders have female almost as frequently as male members.

Philanthropy as an organized movement of national scope culminated in 1873 when the first National Conference of Charities and Correction was held.

This organization now numbers between 2,400 and 2,500 members, and represents all phases of philanthropic and charitable work. There are several societies working for international peace. The Lake Mohonk Conference on International Arbitration was founded in 1895. The National Municipal League, 1894, enrolled in 1909 in 168 organizations reporting 163,473 members. The American National Red Cross Society was incorporated in 1905. It is a systematically organized body for furnishing relief in disasters of national scope. In 1911 it has a membership of 15,000, organized into local chapters, and has an institutional affiliation with 15 associated charities. The National Civic Federation founded in 1900-01 has as its purpose the co-operation of the best brains of the country in an educational movement toward solving some of the great problems related to social and industrial progress. It has an executive committee of over 50 leading representatives of capital, labor and the public at large. The National Conservation Association was organized in 1909 to fight for the prompt and orderly development of our natural resources. It is a separate organization from the National Conservation Congress, formed the same year, though the two work harmoniously.

Of slightly different nature, as far as basis of membership is concerned are the educational associations.

The National Education Association, formed in 1857 as the National Teachers' Association, assumed its present name in 1870. This is the official society of the teaching profession, and has as its purpose the elevation and advancement of the profession. On Dec. 1, 1909, it had a membership of 10,964. The Chautauqua Literary and Scientific Circle was founded in 1878 with the aim of continuing the influence of the Chautauqua Assembly throughout the year in all parts of the country. Since that time more than 260,000 members have been enrolled. The Association of Collegiate Alumnæ was formed in 1882 for the purpose of uniting the alumnæ of different institutions for practical educational work. Dec. 1, 1909, the number of regular members was 4,377.

More specific in character are the societies for science, literature, and art.

The American Association for the Advancement of Science had its first meeting in 1848 in pursuance of a resolution adopted in 1847 by the Association of American Geologists and Naturalists. This is the most comprehensive of American scientific societies, having an enrollment in 1910 of over 8,000 members, in 11 sections, and an affiliated relationship with about 30 societies within the scientific professions. A more exclusive organization is the National Academy of Sciences, incorporated by congress in 1863. There are now 115 members and 44 foreign associates. In the National Academy of Design there are 138 national academians and 124 associate national academians. The American Academy of Arts and Letters dates from 1904. Its first members were selected by 7 men, chosen by the National Institute of Arts and Letters from its own body, with authoriy to select the other members of the Academy until the number should reach 50. The National Institute was organized in 1898 at a meeting of the American Social Science Association, the qualification for membership in which is 'notable achievement in art, music or literature.' The number is limited to 500. The American Social Science Association was organized in 1865, its field being the investigation and discussion of all subjects pertaining to the progress of human society. It has a membership of about 1,000. A similar society, founded in 1889, is the American Academy of Political and Social Science which has about 4,000 members.

Several special religious societies deserve attention besides those organized with churches.

The churches in 1910 had an aggregate membership in the United States of over 34,500,000. Part of the church work is conducted by specially organized missionary societies. There is no separate membership in most cases. The members of the American Baptist Missionary Union for instance, are all members of the Baptist Church. Auxiliary societies of women exist in which money payments corresponding to dues are sometimes expected. The point of view in these religious societies is different, however, than in any other form of club, or than in the Young Men's Christian Association, where a regular payment is made in turn for certain privileges. The Y. M. C. A. was founded in England in 1844. The Boston and Montreal Associations were founded in 1851; the first national convention in America occurred in 1854. At present there are in North America over 2,000 associations with an aggregate membership of 500,000. The Young Women's Christian Association started in England in 1855. In this country the organization was formed in 1858 as the Ladies' Christian Union.

The patriotic societies in existence before the Revolution may be said to have been largely political in character.

The Society of the Cincinnati was the first of that group now prominent that have as a basis of membership an hereditary qualification. The World Almanac of 1911 mentions 32 such organizations for men, 11 for women, and 4 that have a mixed membership. The chief military organizations are the Society of the War of 1812, formed in 1826, the Aztec Club of 1847, the Grand Army of the Republic, 1866, which in 1910 had 213,901 members, the Sons of the Revolution, 1875, the Sons of Veterans, 1879, and the Societies of Spanish War Veterans. In 1883 the Woman's Relief Corps, Auxiliary to the G. A. R., was formed with the object especially to aid and assist the G. A. R., and to perpetuate the memory of its heroic dead. It had in June, 1910, 164,255 members. In 1890 was started the group of societies which employ this hereditary qualification as a means of obtaining an exclusive membership for social purposes. In the same summer were formed the Colonial Dames of America, and the Daughters of the American Revolution, the latter being the more influential of the group, having in 1910 a membership of 60,250. The characterizing feature of these clubs is not their purpose but their eligibility test.

Most of the labor unions of the country are affiliated into the organization known as the American Federation of Labor.

In 1910 this was composed of 122 national and international unions, with an aggregate membership of 1,534,700. In the railway unions not affiliated with the federation were 282,136 men, and in the other independent unions 138,688. Besides these there are several organizations such as the Knights of Labor, the American Labor Union, and the Western Federation of Miners, from whom no figures could be obtained. The estimated trade union membership in the United States and Canada for 1909 is 2,500,000 (57, p. 404).

At the time of every political campaign local political clubs spring up everywhere in all parties.

In the two leading parties there are strong permanent organizations of a central character. The National Republican League of the United States was organized in 1887 by delegates from about 350 local clubs, its aim being to enlist voters for the party. It has a membership of 1,500,000. A similar organization in the Democratic Party, now in its third year, has 875,000 members.

National organizations exist in many of the professions.

The American Medical Association was incorporated in 1897 and has a membership of 35,500. The American Bar Association was organized in 1878 and now has 4,000 members. From these it is but a step to the professional organizations of business men. The American Iron and Steel Association is classed by the Carnegie Institution as one of the learned societies. It was founded in 1855 to take all proper measures for the advancement of the trade, and its membership is constituted of manufacturers of iron and steel. The same handbook includes the American Railway Master Mechanics Association, 1868, founded for the advancement of knowledge useful for this trade. The National Association of Manufacturers, 1895, is but the most general of 500 employers organizations that might be named. Corresponding to every degree of organization of labor exist organizations of capital. So on down the list we might go, if there were paper enough, to enumerate the clubs of governors, bankers, accountants, commercial travellers, clerks, pickpockets, thieves, tramps and 'black-handers.'

Another type of organization is represented in the athletic associations.

These exist locally in almost every city in every branch of athletics. For the last 20 years amateur athletics has centered in the American Athletic Union, which now represents in active membership over 400 local clubs, and as allied members 10 national associations, the aggregate membership amounting to about 2,000,000 competing athletes. It was organized in 1887 and after a war of several years with its predecessor, the National Amateur Athletic Association of America, which was founded in 1879, the latter was absorbed.

A society in a class by itself is the National Grange of the Patrons of Husbandry, 1867. It admits women on an equality with men. Its purpose is to promote all that is best in the mental, social and spiritual development, as well as to advance the material interests of its members. Local granges have been formed among the farmers of every section of the country. In numbers it reached its greatest height in 1875, when there were 1,500,000; this was the result of the panic of 1873. At this period the society got into politics with disastrous results. At present it confines its activities to educational and social wrok.

In the above treatment the aim has been to describe the chief facts regarding the most prominent representatives of all types of the club. Most of these have been national societies. Connected with each are local organizations, formed on a similar plan. In thousands of cases, however, there are local clubs entirely independent, and each varying from the others. Foremost among these is the 'social club' formed in every town. Where there is wealth enough a club house is built. The World Almanac gives the names of 76 such clubs in New York City, which have a membership of

75,000. The chief purpose in the social club is a good time and the agencies employed are almost as varied as human interests. In the way of summary of the adult clubs nothing can be said but that for every conceivable object a group of people may have in common the American tendency at present is to organize a club.

SECTION II. INTERPRETATION OF THE DATA

Chap. I. The Dynamic Mental Forces which Produce the Club

Thus far this thesis has confined itself to a presentation of the facts regarding the club, *i. e.*, to the structural aspect of social psychology. This section of the paper attempts an interpretation of these data, which process constitutes the functional aspect of social psychology. In the genetic approach to this question it is possible to see the development of the different psychical processes involved. The task of this chapter is to describe the dynamic mental processes which produce the club.

It will be helpful first to draw a distinction between the activity of the group and the form of organization of the group. The activity has its causal plexus more firmly established and developed than does the form of organization. The needs of the human race do not change with every wind of fad, but are fundamentally the same in all groups throughout ages. In studying the activities of boys' and girls,' men's and women's clubs we find at base the innervating cause that has inspired the group life of ages. On the other hand, the fraternal beneficiary organization, the woman's club and the societies of boys and girls have a form quite modern. Moreover the universality, in America at least, of membership in clubs of one kind or another, is one of the facts sociologists have found remarkable.

There are but three kinds of self-activity: play, work, and drudgery. (I am following here Dean Thomas M. Balliet, as he treats this subject in his classroom lectures.) Some-things are interesting in the doing without reference to what results from that activity; this is play. Work differs from play in that it has an end that is desirable. The activity itself may be interesting or uninteresting; the distinguishing feature about work being that it is performed for the sake of an end. Drudgery is unpleasant activity which accomplishes nothing; the doing and the result are both painful and useless. In studying the activities of groups we have to consider only the first two. A society based on drudgery cannot endure. I would go beyond Dr. Balliet here and classify play on the instinctive level of activity, and place work on the reflective level. The most fundamental instinct any organism has is activity, just pure movement for its own sake. Our definition of play, therefore, makes it fundamentally instinctive. The new element added to activity which makes the compound work is forethought, the idea of end, deliberation.

This classification of self-activity is directly applicable to the study of group life. Up to the age of fourteen, on the average the club organization was found to be purely incidental to the play life of a group already formed. After that age it was clearly evident that ulterior purposes were motive powers for bringing together a group. The transition is not abrupt. The first appearance of reflection in group life is made in groups originally ruled by instinct. What can be said is that boys and girls do not deliberately form groups for an ulterior purpose until about the age of fourteen. The appearance of the reflective process in group life by no means banishes the instinctive. In fact in all life the reflective is a secondary motive. Especially is this true of club life, a type of life which is in general only possible when the day's work is over. It is in the club that adults get themselves back into the play attitude of childhood.

The motivation for the activity of group life is then either instinctive or reflective or both. A consideration of the content of the activity introduces another functional process, namely contagion. The content of play is in part recapitulation, *i. e.*, so far as it is instinctive. A clearer statement of the function of recapitulation, however, would be to say that, in so far as an individual resembles his ancestors, as the result of an instinctive *Anlage*, he will act as they do, and that in general the individual tends to pass through the stages of development that the race has traversed. Because of the fact that a great part of the literature dealing with the club misinterprets recapitulation it seems necessary to interpolate a statement of our position. The chief error has been due to the fact that primitive life has been misinterpreted. If modern anthropologists be correct primitive man was not so savage and gorilla-like as, à la Jack London, we have been wont to conceive. The savage is pretty close to the intellectual leader of our civilization, if we but take the latter on his unguarded vacation moments. The Englishman enjoys hunting and fishing as much as does the savage. The American college professor approximates the life of the Indian just as closely as he is able, when he gets a chance. The main difference is in the degree of complication and organization of his social life. The primitive man lived under an economic régime where there was no factory system nor complicated social structure, but his was the first hand contact with nature. His struggles, which were the same as the civilized man faces, were met with different tools and in a different degree of organization. The two men, the primitive and the present day man were fundamentally the same. To use Prof. A. F. Chamberlain's phrase, both are 'generically human.' The boy of to-day is an Indian in the sense that he is an uncivilized man; he has n't become a cog in the great economic or moral system. Psychologically the chief fact is that the boy's moral sense has not reached the point of development where he can understand his relationship to the larger social group. We say he is a 'little savage.' We mean that he is in that period of growth when, the power of reflection appearing, all previous standards of conduct which before have been accepted unreflectively, now come to the bar of individual judgment, and the first reaction is a revolt, an insurrection against the moral order. The truth in recapitualtion, if these facts be correct, is then that the individual does recapitulate the race history, but our history has been misinterpreted.

The viewpoint of recapitulation provides an explanation of many of the more individualistic activities. In boys the life of woods and field and stream with its hunting, swimming, fishing, building of huts, tents and dug-outs, the exploring of caves, trapping, skating, coasting, making boats, and in girls, keeping house, making clothes for and caring for dolls, making mud pies and similar activities may be considered as motivated from the great instinctive or recapitulatory power house.

The organized games such as baseball, football, hockey, cricket, basketball, as well as tag, duck on the rock, prisoner's base and the scores of similar games, and in girls' activities croquet, keeping store, playing church, jump rope, clap-in and clap-out, these, and the other group games of similar nature involve in the consideration of their content the factor of contagion, using that term to include both imitation and suggestion. By far the greatest part of the content of the activities of pre-adolescent clubs is the result of imitation of the activity of others, or is the effect of suggestion by others. A curious misinterpretation is recorded above in Sheldon's treatment of clubs. The period before ten he calls that of imitation, that from ten to fourteen he calls the period of invention and the following of instinct. As illustrating imitation he describes the experience of a group of school children. The teacher read an Indian story; all the next winter the children played Indian. This correctly enough he interpreted as imitation. A group of thirteen year old boys, however, formed a Jesse James gang (Sheldon makes the parenthetical statement that tales of this notorious leader were rampant at the time). This he interprets as showing reversion, the following of instinct. Certainly the latter case is as truly imitative as the former; both are in fact good examples of imitation. Such is the correct interpretation of all Indian games. Recapitulation will explain the love of outdoor life, but it will not explain the wearing of feathers, the shaping of tomahawks or of bows and arrows. Recapitulation will explain such predatory activities as stealing apples and watermelons, but it cannot be used to explain the organization of bands of desperadoes of robbers, pirates and military companies.

As illustrating the power of contagion in determining the content of girls' club activities the following may be cited:

> "When about twelve years old I formed an organization with about eight other girls of my own age. We called our society the Chrysanthemum Society, and our object was to help if we could the little heathen Chinese children which we had heard and read so much about. This was a purely voluntary organization, no one knowing anything about it at first with the exception of the members. We had, I remember, a meeting once a week for about two weeks. In these meetings, which lasted about fifteen minutes, we would have some verses read from the Bible. I remember that I was always anxious to be the one to do the reading from the Bible. After this each one would read some short article concerning the children in China; then we would discuss what we intended to do to help them. We finally decided to hold a fair. This we did and sold lemonade and cake. We invited all the boys and girls that we knew in the neighborhood. They knew nothing about our society until the day of the fair. What little money we managed to get from the fair we gave to our Sunday School teacher, who was greatly surprised when she heard what we had done. I think that our organization did not last over two weeks. We finally grew tired of it and abandoned it."

From among a large number of others this illustration may also be given in full:

> "The first club to which I belonged and which was formed by my playmates was the 'Sewing Club.' We five little girls, about eleven and twelve years old, were greatly absorbed in sewing—either embroidery of small pieces for ourselves or the tiniest of doll's clothes. There were no other girls admitted to this club, because the other girls whom we knew were not interested in sewing as we were. Then, too, the club changed its real purpose and it became rather a secret society. The club was started about the beginning of the summer vacation and toward the end we decided we had enough doll's dresses. Just at the time there had been many interesting reports concerning the society people of New York . We talked about these events at our club meetings and finally decided we would pretend we were these wealthy people. Each chose her favorite name for herself and her husband and thereafter we called our club the 'Fourhundred Club.' The chief object of this club seemed to be to imagine ourselves in all the positions of our respective rôles—attending grand balls, theatre-parties dinners and the like, with the gowns and everything appropriate which we

could imagine. Being thoughtful children as well as very imaginative we did not forget the poor people of whom we heard much from the conversation of our elders. In our imagination we gave bountifully to charity and to all who came in our path. To be sure, in our real life, we knew we never could do so much as this, but to me at least, it was a pleasure beyond that of the beautiful gowns, to think of some one who might be able to do it. Our only passwords were our assumed names. This club continued for about two years and even after two of us moved away from the town we continued it in our letters."

As Sheldon made the mistake of calling the period from ten to fourteen predominantly that for the following of instinct as a determinant of the play content, so also he was incorrect in calling this the period of invention. Invention or the contribution of original interpretations to situations and phenomena are not the product of minds that do not deliberate, and deliberation in the preadolescent bespeaks the precocious child. Deliberation as a process in the formation of the content of play seldom occurs before thirteen or fourteen. When it does appear it completes the trio, instinct, contagion and deliberation, which constitute the determinants of the content of the activity of the group.

Our treatment of the development of the form of the organization of the group is quite closely related to Baldwin's study of "The Basis of Social Solidarity" (9 and 8). He differentiates three modes of collective life: (1) the instinctive or gregarious; (2) the spontaneous or plastic; (3) the reflective or social proper. The first is the gift of physical hereditary. The second is the result of social transmission, an emotional response to a social suggestion, its laws being imitation, suggestion, contagion, spontaneous union in common experience and action. The third is the mode of conscious intention, of intelligent judgment, the force which leads people to rebel against the authority of society and the rule of plastic suggestion. The first mode of collective life is illustrated in the family life of animals. The crowd following the leader is the typical example of the second sort; the committee, the legislature, the administrative bureau represent the third type of organization.

Baldwin does not apply this schema to the interpretation of the club, but gives us a point of departure. If we may broaden the instinctive element, gregariousness, to include the additional factors involved in sociability, the resultant complex will satisfy our conception of the forces which produce the club. Sociability is one of the sentiments, using the word sentiment as Titchener defines it: "The sentiment represents the last stage of mental development on the affective side, as thought represents the highest level of development on the side of sensation and image" (76, p. 499). Sociability is gregariousness evolved to the level of a sentiment.

The affective element in gregariousness is made evident by a feeling of uneasiness in isolation from, and a feeling of satisfaction in the physical presence of one's kind. As Kropotkin has shown by a wealth of illustration (47) gregariousness is a common instinct of higher animals. He says: "The necessity of communicating impressions, of playing, of chattering, or of simply feeling the proximity of one's kindred living beings pervades nature, and is as much as any other physiological function, a distinctive feature of life and impressionability" (47, p. 55). A classic description of gregariousness is given in the "Inquiries into Human Faculty" (28, p. 68-81) where Galton relates his experiences with the South African oxen. Two processes, at least, contribute to the development of gregariousness, association for protection against opposing enemies and elements, and association in play, the activity of the leisure hours, perhaps, when the demands of eating and fighting have slackened. The resultant legacy left to man from this gregarious association of animals is an instinctive pull toward the company of other men. In its lowest form it expresses itself as the joy of being in a crowd. The professional entertainer recognizes this and throws out inducements to draw the crowd, because the crowd is in itself an asset, even when it spends no money. One of the greatest attractions of Coney Island is the fact that there one will be in a crowd. Gregariousness explains why on election night or New Year's Eve in the great city multitudes of well educated people find themselves irresistibly drawn to the streets where the crowd is thickest. There is a feeling of exaltation and exhileration that sweeps over one when in a crowd that has a charm all its own, because it satisfies a primal need. McDougall attributes the growth of cities far beyond the point of optimum economic efficiency to this instinct (49, p. 296-301). Ross writes: "These instincts (gregarious) appear as craving for the presence of one's kind, distress at being left alone, nostalgia after separation from mates, and a capacity for social pleasure indicated by mirth, laughter and festal impulses. They lead to social amusement, play, games, dancing, feasting and intercourse. These in turn foster friendly interest, spontaneous helpfulness and a sense of solidarity" (65, p. 14). As is suggested in this statement the concept of the consciousness of kind, in Giddings's terminology (29, p. 17) is envolved. Gregariousness, however, adds the desire to be with those of one's kind.

The baby shows by a smile at the age of two months, according to Darwin (21, p. 289), Preyer (60) and Perez (59, p. 29) that it enjoys the presence of others. This reveals gregariousness. O'Shea says: "When one sees an infant reciprocating the loving expressions of its mother, and later pleading with her to remain near by merely that he may enjoy her presence, it seems beyond question that he has brought with him the rudiment of sociable feeling which causes him to ascribe a social value to persons and to desire to have friendly intercourse with them" (58, p. 5). Referring to the work of Sully (78, p. 242) and of Kirkpatrick (46, p. 119) O'Shea continues: "It is not too much to say that there is a kind of pleasure in personal intercourse which the child experiences before he has completed even six months among us" (58, p. 5). Cooley's statement on this point is as follows: "By the time the child is a year old the social feeling that at first is indistinguishable from senscious pleasure has been much specialized upon persons, and from that time onward to call it forth by reciprocation is the chief aim of his life" (18, p. 49). Kirkpatrick says: "As early as the second year they (children) manifest great pleasure in the company of other children near their own age" (46, p. 119). McDougall says that "agoraphobia seems to result from the morbidly intense working of this instinct" (49, p. 85).

As the child grows, gregariousness becomes sublimated in various sentiments, one of the most important of which is 'active sympathy,' to use McDougall's terminology. This constitutes the second level in the development of sociability. Active sympathy is a different process from the crude, sympathetic reaction. "It involves a reciprocal relation between at least two persons; either party to the relation not only is apt to experience the emotions; he actively seeks the sympathy of the other, and, when he has communicated the emotion, he attains a peculiar satisfaction which greatly enhances his pleasure and his joy, or in the case of painful emotions, diminishes his pain" (49, p. 168). Crude sympathy is that which Darwin saw in the expression of his child "at six months and eleven days by his melancholy face, with the corners of his mouth well depressed, when his nurse pretended to cry" (21, p. 294). When this crude sympathy is supplemented by gregariousness the product is the sentiment of active sympathy. We follow McDougall here: "Since man certainly inherits this (the gregarious) instinct, we may see in this the principle that we need for the explanation of the development of active sympathy from the crude sympathetic induction" (49, p. 170).

Sympathy deals, however, only with the affective phase of experience. Sociability, on the other hand, presupposes ideational as well as emotional experience. Sympathy can scarcely be used to denote both types of process, since sympathy means suffering with, *Mitgefühl*. The broader meaning added by the process of intercommunication of thoughts is expressed by the term *rapport*, as this presupposes both the emotional and ideational intercommunication. Sociability, then, is the sentiment which finds its manifestation in satisfaction when two persons are *en rapport*, and in loneliness when this need for intercommunication of thought and emotion is unsatisfied.

As distinguished from gregariousness, sociability requires intercommunication of experience between individuals, reciprocity of thought and emotion, if not absolute free trade. One of the walls in the structure of sociability is the desire to be appreciated. This involves at least an awareness of personality, and it increases in direct ratio as the sense of self becomes more clearly defined. The longing to be appreciated is one of the most universal human cravings and its satisfaction is one of the chief functions of sociability. The complementary wall of this structure is the possession of the power to appreciate others. There can be no sociability without subordination of self to an extent necessary to allow of a recognition of other selves. Prof. James said: "We are not only gregarious animals, liking to be in sight of our fellows, but we have an innate propensity to get ourselves noticed, and noticed favorably by our kind. No more fiendish punishment could be devised, were such a thing physically possible, than that one should be turned loose in society and remain absolutely unnoticed by all the members thereof. If no one turned round when we entered, answered when we spoke or minded what we did, but if every person we met 'cut us dead,' and acted as if we were non-existing things, a kind of rage and impotent despair would swell up in us, from which the cruelest bodily tortures would be a relief; for these would make us feel that, however bad might be our plight, we had not sunk to such a depth as to be unworthy the attention of all" (43, p. 293-294). The ability to subordinate self involves the development of the sense of the alter. Baldwin (7) and James (43, p. 291-401) have shown that the sense of the alter is acquired with the sense of the self. This is no easy acquisition, but comes only with years of knocking up against other people. The studies of group life have shown that as soon as the child is able to leave his mother's apron strings, at about five or seven, he seeks the companionship of others of his kind. Thus is gregariousness manifested. O'Shea says: "The boy at first wants to be it. Gradual discipline in group relations develops the group consciousness" (58, p. 304). The reason why early activity is unorganized, uncontinuous, inco-ordinate, is because the children have not yet learned to get out of themselves and see the game as others see it. A game of baseball among pubescents is a noisy, riotous, scrappy affair and it almost invariably terminates in a fight. The 'fighting instinct' here finds its *raison d'être* in modern society in serving the function of subordinating innocent, unsophisticated self-feeling to the will of the group. The gregarious impulse compels them to get together so again and again they try it, and gradually as the result of hard knocks, each learns to appreciate the rights of the others. In this way is laid the foundation of sociability, the power to appreciate the other fellow's point of view. This process usually takes until the age of twelve, as the studies of group activity have shown.

The negative evidence of sociability is lonesomeness, nostalgia. This feeling is manifest in all types of mental culture. It appears in its highest form among scientists, philosophers, artists, or other pioneers on the frontier of thought, when separated from minds sufficiently developed to appreciate their interests. Hauptmann in "Einsame Menschen" (38) gives the classical picture of this type of loneliness. Literature furnishes many examples; actual life many more. In Chap. XVI of the Epilogue of "War and Peace," Tolstoi presents a fine illustration of this highest type of sociability: "Natasha and her husband left alone, also talked as only wife and husband can talk, namely with extraordinary clearness and swiftness, recognizing and communicating each other's thoughts, by a method contrary to all logic, without the aid of reasonings, syllogisms, and deductions, but with absolute freedom. . . As in a vision everything is illusory, absurd, and incoherent, except the feeling which is the guide of the vision, so in this intercourse, so contrary to all the laws of logic, the phrases uttered were not logical and clear, while the feeling that guided them was" (82). The demand of sociability in the cultivated man is a burning desire to talk to some one about the problems that occupy the thoughts. To be sociable does not mean that individuals must think alike, or hold the same opinion, but that they must understand and appreciate each other's thoughts; they must be congenial in their thinking. This involves us in the subject of congeniality of interests, which is discussed in the following chapter.

For gregariousness, then, in Baldwin's schema we substitute sociability, a more highly developed sentiment, as the primary psychological factor of those which produce club organization. It is this which brings children together originally, and after clubs are formed it is sociability which of all forces is the most powerful in holding them together. By far the most prominent reason given by children for the existence of clubs is that they enjoy being together. Nor does the power of sociability diminish with age, for with rising mental grasp rises also the type of sociability. In the boys' club sociability is satisfied in the athletic contest, the interplay of physical experience; in adolescent clubs sociability utilizes to a greater extent the interplay of emotional experience and to a lesser degree of ideational experience. With adult clubs sociability is more dominantly satisfied with the interplay of ideas. In one level of society those ideas may constitute nothing but gossip, or the news of the more concrete, nearer interests. In the scientific or professional society this sentiment is satisfied by the food hardest to digest, but most tempting to the educated mind. Groos has recognized this where he says, in "The Play of Man" (31, p. 337): "Finally, I remark that a playful motive is often discerned in the formation of the multifarious clubs for the advancement of some worthy object in this age of abounding culture. We all know persons for whom the absolute interest in the ostensible purpose of the club would be out of the question but for the good company. The mere fact of being one of a group is satisfaction enough to the gregarious instinct and the playfulness of this condition can scarcely be questioned." Hugh Black points out the fact that, "the very existence of the church as a body of believers is due to this necessity of our nature, which demands opportunity for the interchange of Christian sentiment" (10, p. 72). In all societies, this interaction of individuals upon other individuals as they impart their experience and receive in turn the experience of others, produces a satisfaction which is the chief cement binding clubs together.

The second factor of those which determine the establishment of the club is contagion. Baldwin speaks of this as a group of factors which he calls spontaneous or plastic, as we pointed out above. Tarde (80) attempted to explain all social organization by this factor alone, which, while failing to recognize the other factors, has forced everyone to appreciate the immense rôle played by imitation. If Tarde had been treating preadolsecent clubs only, instead of the whole social organism, we might follow his position more closely. But imitation involves in its very definition something to imitate. The original model was formed to some degree through deliberation. So with clubs. Adult clubs form the model copied by children.

The studies show that with boys and girls under thirteen or fourteen the clubs are merely incidental to the other group activity. The club is just another form of play, *i. e.*, is a form of activity carried on without an ulterior motive. A few examples illustrate the general rule that the form of organization as well as the content of the activity of preadolescent clubs is the result of contagion.

"When I was about twelve years old, I became acquainted with a girl two years older than myself, who, as she was in high school, seemed a very great and marvelous person to me. As she lived near me, we naturally became friends, and although she treated me in a sort of supercilious manner such as girls of that age are apt to use toward younger ones, I admired her with all my heart, and looked upon all her words and actions as an example. One day I overheard her talking to a friend about some secret society to which she belonged, and of course I could not rest until I found out all the particulars and had made plans for the forming of a secret society of my own. I told three other girls about it and they were all eager to be in it also. Our place of meeting was to be the darkest corner of our attic and the aim was to write a book of joint authorship that when published was to be the marvel of the age. (It was the latter, though I'm sorry to say it was never published.) The meetings were lighted by candle-light, and the password was: 'I have told no one.' The entire society consisted of six girls and a rag-doll, which was the mysterious seventh person; and each member brought one cent to each meeting, which occurred each Saturday afternoon. The business of the meeting was soon dispensed with, and then each week a member would write a new chapter to the book and read it, as her part in the programme. After the reading of the chapter refreshments were served which were six lollypops or peppermint sticks, bought with the dues of the week previous. This organization lasted for nearly a year, and then would not have become dissolved had not illness (in the form of measles) overtaken four of the principal members. The book certainly was on its way to be a masterpiece, but fate interfered, and the short, sweet life of the 'Society of the Daughters of Literature' ended."

This account shows more individuality than most and, in that respect, shows less the force of contagion, yet this club was the result of suggestion.

As contagion almost entirely explains the form of organization of the club in the years of preadolescence, it is after that age and throughout adult life a very powerful factor. Deliberate organization always sets the type; the thousands of copies are run off from an electroplate. High school fraternities mimic the college organizations. The later college societies copy those first formed. The secret fraternal organizations which have a membership amounting in numbers to one eighth of the entire population of the country are not fifty years old. They are imitations in one form or another of the three earliest, which have had a history of many generations. New scientific societies are modeled entirely on the constitutions of older ones. The fact of contagion in determining the organization is so evident as to need no further elaboration.

The third great factor in this process of club formation is deliberation. In an earlier paragraph reflective action was made synonymous with activity carried on for the sake of an end. Clubs, the organization of which are the result of deliberation from that fact imply that they have a purpose in mind. Another implication of deliberately formed clubs, or voluntary associations, as they may now be called, is that their members realize the importance of united action; recognize strength in union.

A classification of voluntary associations necessitates a recognition of all the motives that move men to united action. The classification of motives is a problem for the ethicist. Clubs might well be grouped under three headings: (1) those formed for self-advancement; (2) those formed for the advancement of others; and (3) those formed for the advancement of a cause. Most voluntary associations unite all these motives and it would be impossible to evaluate all organizations on this basis.

In our studies the deliberate motive did not make its appearance until the age of twelve to fourteen. Among the girls' clubs it was found that those clubs which were not merely incidental to the play life of the group did not appear until about fourteen. In Sheldon's study the group of literary, music, and art clubs was insignificant until fourteen. Among boys the growth of the deliberate motive is harder to trace. Johnson's study, "Rudimentary Society among Boys" (44) furnishes an excellent example of the way rules develop by the trial and error method. In the McDonough School, isolated several miles from Baltimore, these boys were comparatively free from suggestion. Having new situations to face they worked out original rules in regard to the gathering of nuts and eggs, catching rabbits and muskrats. A picture which more truly parallels the actual process of development, as it occurs in an unisolated situation, is that painted by Pres. Hall in "The Story of a Sand-Pile" (36). Gulick's study reviewed above, showed that co-operative games appear after the age of twelve. Such games require some degree of planning and forethought, though to a lesser degree than is required in a voluntary literary club, because all the boy's previous training has been in athletics. The beginning of the high school period is as early as deliberate motives play any great rôle either in boys' or girls' clubs.

In summary of our consideration of the dynamic mental factors involved in the formation of the club: All clubs are at base founded as the result of the innate tendency to be sociable. But the club may be formed either as the result of contagion or of reflection. In the experience of the individual it is formed first through contagion; later through deliberation. In the adult club both forces are at work.

Chap. III. The Mental Conditions Necessary to the Formation of the Club

In the preceding chapter the aim was to present all the mental forces which in their functioning produce the club. They are the seed; their fruit is the club; but the soil of human nature which is the environment in which their development occurs must needs be of a peculiar sort. There are certain conditions necessary to the formation of the club, which it is the purpose of this chapter to discuss.

The first condition is that there be individual differences in the capacity of leadership. In group activity it is necessary that there be some one to take the initiative, to be the leader. There can be no united action where all are blind followers with none to suggest or guide. However, it seldom happens that any group assembles in which there is no one who possesses more ability as a leader than do the others. This is one of the commonest of individual differences. In children, as in adults some are leaders, a greater number are followers. Mumford has written a thesis on this subject. Groos says:

> "The blind obedience accorded a leader of a little band is calculated to fill parents and teachers with envy. Here the social impulse is supreme in the demand for association and classification which governs and directs society. . . The common fighting plays of children markedly exhibit this voluntary submission to a leader, less known, I think, in regulation games than in the many contests which a crowd of children will naturally fall into when a few belligerent spirits are present; when there is a trick to be played on schoolmates or janitor, or an orchard to plunder, some unpopular person to annoy by breaking his windows or otherwise damaging his property—in these escapades the leader's word has absolute authority, and the most docile children will commit deeds in blind obedience which fill their parents with amazement and horror." (31, pp. 338-39.)

The studies of clubs show the importance of leadership. Leadership is one of the most prominent characteristics of the gang, as shown particularly by Puffer's study. Leadership is less prominent in girls' than in boys' clubs. This is to be explained, probably, by the nature of the activities of the two sexes, or on the sexual differences which determine the activities. The physical activity of boys demands leadership; in sewing, serving tea and social activities there is less occasion for leadership. Most of the cases where officers existed in girls' clubs may be explained by contagion. One girl reported that there was no definite term of office, but new officers were elected whenever they felt the need of some excitement, thus the fact was revealed that in this case the election of officers was merely another play activity. Interesting in this connection is the comment of Groos:

> "It seems that those manifestations of the social impulse relating to subordination are not pursued by women so energetically nor in the same way as by men. Woman is the guardian of good form, but as a rule she will not subordinate herself to rigorous law. I think any customs agent will bear me out in the statement from his observation of the behavior of travellers. This probably results from a difference in the instinctive equipment of the sexes; fighting impulses which are strongly developed in the males, further the social ones by reason of their imperative requirement of association. . . The success of American women in their

movement for emancipation is largely furthered by their participation with men in various sports and the consequent better development of their social capacities (31, p.339-40).

The second condition necessary to the formation of the club is congeniality of interests. "The term interest," says Miss Calkins, "is best used as a synonym for involuntary attention" (15, p. 103); or as Dewey states it, interest "is impulse functioning with reference to an ideal of self-expression" (23, p. 22). The direction of one's interests is determined by temperament, that is, by inherited *Anlagen*, and by the type of experience lived through. Dewey says: "they (the occupations of the individual) decide the sets of objects and relations that are important, and therefore provide the content or material of attention, and the qualities that are interestingly significant" (24, p. 220). The interests of young children are similar, since temperament is but dimly manifest until self-consciousness develops, and because early experience is approximately alike for all. The children of master and slave play together in perfect harmony. In later years social equality is impossible because of the disparity of interests. Similarity of experience or training, in individuals of similar native interests, tends to give approximately the same level of ability, the same level of apperceptive mass; ability to understand the same ideas, to appreciate the same art and literature and music, to carry on the same activities of work and play; opportunity to enjoy the same social status, to see about the same amount of the world, to mix with about the same class of people; in sum, to develop the same interests.

A club to be durable must be formed by people having the same type of interests. Women's clubs must consist of women of the same social stratum. There can be no working together, between the woman on the rag-time level of appreciation and the woman on the symphony level. A social club is unsuccessful in which some members know of nothing to converse but gossip, while others have broadly trained interests. Young boys and girls can't get along together in clubs because their interests are absolutely different. Miss Addams calls "the companionship of mutual interests is the soundest of social bonds" (4. p. 151). Ross says the labor union is due not to a spirit of association, but interlacing interests (65, p. 181). Those who would work for unity of different religious denominations should not overlook this fact. It is by no means implied in this connection that the different members be of like minds; that is, agree in their points of view in regard to religion, politics or what not, but it does mean that they agree in having an interest in the ultimately true position in regard to these matters. It must needs follow, then, that they will be undogmatic enough to recognize the possibility that some other then their own viewpoint may be the right one. A very good club may be formed of Jews, Catholics, Protestants and atheists; they may meet on the basis of congeniality of interest if, back of their desire to support each his own view, there be a common interest in the truth.

Ratzelhofer considered interests to be the ultimate psychological factors which differentiate groups in society (62). He failed to recognize, however, the deeper underlying forces which develop individual interests. He over-emphasized native interests and underestimated the power of training. Moreover he was dealing with the larger groups which constitute society. Our position is, merely, that congeniality of interests forms one of the conditions of the successful club.

In the formation of clubs failure is often experienced, as in many other movements, the stated reason being that the time was not yet ripe. Translating this metaphor into a psychological statement, we would say: a sufficient number of people had not acquired the same particular interest. The history of the woman's club movement illustrates this. To use a specific case, the attempt at Seneca Falls, N. Y., in 1848, to form a suffrage society, was a failure. The club could not get more than twenty members and only lasted about a year because as the organizer said: "Amongst my own sex I found too many on whom ages of repression had wrought their natural effect and whose ideas and aspirations were narrowed to the confines of 'woman's sphere,' beyond whose limits it was not only impious, but was infamous to tread." In other words they were not interested in this movement.

Consciously or unconsciously clubs recognize the necessity of congeniality of interests, and realize further that the more the congeniality the sounder is the foundation of the club. Observe the eligibility tests employed by the Daughters of the American Revolution and that type of society as a means of keeping out the undesirables. Social clubs require an extraordinary initiation fee because they want only such as have sufficient wealth to be interesed in the same general atmosphere of recreation and wine. The American Psychological Association requires of candidates that they be of a certain rank in the profession, in order that they may be confident that all members shall have a fundamental interest in the science. College societies, and especially fraternities, generally have a certain individuality. Men of the same type tend to get together. Students recognize this freshman as a typical Tau Delt man or cut out to be a Chresto. Occasionally misfits occur; a man gets into the wrong society. If there are several misfits in the same club the resultant conflict of interests causes hard feeling, disagreement, inability to co-operate and disruption.

These two psychological factors are necessary as conditions of the club's formation, viz., individual differences in the capacity of leadership, and congeniality of interests. No stable club can be formed unless some one at least of the club is a leader. Settlement workers and club directors learn to recognize this when in artificially grouping boys or girls, leaders have to be provided. Dr. Krackowizer describes two cases of clubs that applied for admission to the Boys' Club of the Oranges, and in both cases the club lasted but a week. The fact was that there were no recognized leaders in either group. The other necessary condition for club organization is congeniality of interests. When both of these conditions are present, and only in such cases is there a possibility of forming a club.

Chap. III. Mental Forces Produced by the Club

It is the province of this chapter to discuss the functional aspect of the club, to study the contribution of the club to mental life. Of those forces resulting from club organization, the one of most general significance is that known as the social stimulus. Although produced by the club it is not peculiar to it, but is in evidence in any group, whether or not the group is organized. The most accurate studies yet made of it are those with school children. Schmidt (72), Meumann (53), Mayer (52), Triplett (83) and others (13 and 14) have demonstrated that in all types of school work, except that requiring individuality, better results can be obtained of children in groups than separately. That this force is something different from the stimulus of competition or ambition is evident from the experience of the actor, singer or lecturer who can play his part better under the stimulus of an audience than with empty seats. The group itself exerts a favorable influence. The stimulus is increased when all the members of the group are performing the same task. This is illustrated by dancing, choral singing, marching in step, as Frederick demonstrated in his army, team work in games or work, shouting at a track meet, a ball game or political rally, paced work in the laboratory or a paced race on the track.

In the club this group stimulus is always present and of greater power than in unorganized groups. In the presence of the members of his own club a man is stimulated to accomplish feats and rise to supremer achievements than would be possible for him to reach in any other presence. Since this product of club organization is shared with every other type of social life it need be mentioned only incidentally. Of much greater significance are the other forces to be considered, viz., *esprit de corps*, honor and friendship.

Esprit de corps is a sociological form which needs to be translated into psychological processes. As Prof. James pointed out, in his chapter on the "Consciousness of Self:" "In its widest possible sense a man's self is a sum total of all that he calls his, not only his body and his psychic power, but his clothes and his house, his wife and children, his ancestors and friends, his reputation and works, his lands and horses, and yacht and bank-account." (43, p. 201.) The one phrase of this comprehensive self, of interest to us in this connection, is that which refers to the group of family and friends. The child acquires a peculiar sense of belonging to his immediate social group, and as his group enlarges, his sense of belonging widens. There is an attitude of satisfaction in the feeling of belonging to a family or to a community, which is often not recognized until one is isolated, relatives dear or estranged, and the community cold and unappreciative. It is the loneliness that arises when one feels that he does not belong to any particular group that in part explains why so many answers are received to advertisements of matrimonial bureaus.

This sense of belonging is the germ of Baldwin's "socius," which he defines as "the higher sense of commonalty, personal implication, mutual interest which social intercourse arouses in him. He (the boy) has a sense of the socius, for example, when his own school is brought into rivalry with the school around the corner" (7, p. 32). Later, Baldwin says: "The family *esprit de corps* has such a firm root in the breast of the individual that family action is as necessary to him as action in his own private interest." (7. p. 407.) Approaching the subject from a different viewpoint Prof. Ames said in an address at Minneapolis, Dec., 1910:

> "In more sustained associations such as the workmen in a factory experience, in daily contact, and co-operation, in their home life and neighborhood relations—there is built up a more elaborate and persistent class feeling. There is developed a more definite sense of the group, a feeling of loyalty to its members, of obedience to its standards and of devotion to its ideals. They recognize each other with a sense of kinship and exchange of confidence which they would not show toward men of another class. The same fellow-feeling springs up spontaneously in all men of the same trade or profession and among any companies or gangs whose work or fortunes bring them into mutual contact. Over and above their explicit acknowledgment or realization, there is present a powerful group spirit which has sprung up from their association."

Miss Addams points out that one of the most powerful forces pulling the boy to work at fourteen is, if the family purse is small, his loyalty and affection (3, p. 126). Elsewhere in this wonderfully expressive book, "The Spirit of Youth and the City Streets," she suggests that public games be extended to develop the unity of feeling that is aroused by our one national game (3, p. 96). In no situation is *esprit de corps* more easily aroused than in support of the home team.

A very suggestive treatment of *esprit de corps* is that of Cooley in his "Social Organization:"

> "The result of intimate association, psychologically, is a certain fusion of individualities in a common whole, so that one's very self, for many purposes at least, is the common life and purpose of the group. It is always differentiated and usually a competitive unity, admitting of self-assertion and various appropriative passions; but these passions are socialized by sympathy, and come, or tend to come, under the discipline of a common spirit" (18, p. 23).

He reminds us of how boys will endure cruelty and injustice at the hands of their fellows, such for instance as hazing, rather than appeal from their fellows to their parents or teachers. In such cases the family *esprit de corps* is weaker than that of the student group.

Ross recognizes the same spirit when he writes: "The lively sense of a common life enables mates, kinsfolk, neighbors and comrades to love and understand one another, to yield to one another, and to observe their forbearance and good offices that make associate life a success. In such a case the group does not make the ties; the ties make the group" (65, p. 432).

All these quotations show that no matter what the cause or group of causes effecting the establishment of the group, when once established there is added a new cement to bind it together. Davis expresses it in the following way: "Ideas or sentiments, and also social institutions, when once in existence become thereafter psychic or social factors in all future reactions in essential independence of their origin or their original associations. . . . We see daily private societies formed for all sorts of special purposes, literary, charitable, artistic, political, what not. But an organization has hardly been constituted before it becomes an end as well as a means in the lives of those connected with it; and in that portion of society which it influences the association functions not only as a force for turning social agencies in a special direction beyond itself, but also in part for turning social energy to itself to be absorbed therein" (22, p. 207). It is stated more concretely by Lee: "And the team is not only an extension of the player's consciousness; it is a part of his personality. His participation has deepened from co-operation to membership. Not only is he now a part of the team, but the team is a part of him. Membership becomes a part of a man, an essential part of him, something which cannot be taken away without taking much—indeed the greater and more significant part—of the man's life with it" (48, p. 490).

Puffer's and Browne's studies show the strong part which loyalty to the group plays. Among many examples given by Browne, is found this: "Boy in D—'s gang stole some cherries. He was reported to the boarding school by the woman who owned the cherries. Her description tallied with that of D—. He was whipped for the offender, although he was not the boy that did it; yet he did not tell on the guilty boy" (12, p. 271). We quoted in the section on gangs Robert Woods's description of loyalty to the gang, and how one boy of his acquaintance, though his family had moved to Dorchester, and he had outgrown the old gang in education, still made it his custom to return to the old corner on Sundays. The blood feud of the Kentucky mountains, the sympathetic strike, refusing to bet against your own college, or turning down the offer of a higher salaried professorship because of loyalty to the old school—scores of illustrations could be piled up to show the working of *esprit de corps;* but these will suffice.

One particular element in *esprit de corps*, present in some more than in others is the feeling that one's own group is better than any other. One's own interest is always more important in his eyes, and more valuable, than that of any other. One's own club is better than any other. This is only a broadening of the positive self-feeling that manifests itself in the feeling that, after all, the things of my own life are of more value for me than are the things of any one else. This is the basal idea in the expression: 'number one first,' or in the instinct of self-preservation. Applied to the group, one of the manifestations of this spirit is in the clique. The differentiating element in this type of group spirit is the feeling of caste, or of exclusiveness and aloofness. This was found in many of the girls' clubs. From our data we cannot entirely agree with O'Shea's observation that: "Until adolescence the child seldom recognizes caste stratification" (58, p. 15). Continuing, he says that dress plays no part in the groupings of boys, and its rôle among girls up to the sixth or seventh grade, is of slight importance. With adolescence comes differentiation of groups on the basis of wealth. Sororities and fraternities grow in high school, or even in the seventh or eighth grade more among girls than among boys. This differentiation takes place more in the social activities than in the games and athletics. Our observation would be that the feeling of caste is present with preadolescents, but becomes stronger at puberty. Sheldon found the expression of caste earlier than puberty. His conclusion was that the feeling of caste reached its culmination at about ten. "While its expression in the form of bullying and teasing, as might be supposed, is more intensive among boys, the feeling of exclusiveness and pride appears much stronger in girls. Girls, if so told by their mothers, think themselves too good to play with girls of the working classes or of alien nationalities. Boys, on the contrary, will often run away and disobey parental injunctions to get a chance to play football or baseball with boys of any nationality, Italians, Jews, Irish or even negroes" (67, p. 435-36). Our data do not uphold the conclusion that cast feeling culminates at ten, however, but that it grows more intense with age, at least until the end of the high school period, as observations of high school students show.

The statement made above is that the clique spirit is a broadening of positive self-feeling. The process would seem to be this: in the group activity the individual, originally self-centered, by continual buffeting about by other self-centered children, gradually learns to recognize the rights of the others of his group. This process was described in detail above. After a while the children learn to do team work and there develops a feeling that their team is better than any other team; not necessarily that they can play better, but they are better. The native tendency of each individual to regard himself as of more value than others, which is the root of the caste spirit, becomes ascribed to the group, with the result that the individual's own group becomes more valuable in his eyes than any other. The growth of the caste spirit parallels that of co-operative play, which becomes well established by puberty.

The general observation is that the caste spirit is stronger in girls than in boys. May not the explanation be, that, whether or not the girl of to-day is born with that diathesis, woman's experience has been such as to develop the caste spirit in her to a higher degree than man's experience has in him? Through group activity boys and girls alike develop a feeling of superiority as respects their own group. Boys' groups, however, compete constantly with other groups, and the process that went on earlier between individuals now transpires between groups, and a feeling of superiority is developed for a still broader group. Team spirit develops into school spirit, and the spirit of loyalty to, and assumption of superiority to the school, is greater than that to the class. This experience is not generally true of girls. Their loyalty to, and ascription of superiority to their set, remains much stronger than that of boys, and the accompanying fact is that the girls' set has little opportunity to compete with and be defeated by other sets. It has been the writer's experience in a co-educational college that the girls support their class basket ball team as loyally as do the men, but that it is harder for them to co-operate with their erstwhile opponents to compete against another school than it is for the boys. An incidentally concomitant fact is that girls take defeat harder than do boys. Many other manifestations of this phenomenon might be cited, such as woman's greater family pride, interest in genealogy and the like. Unless by competition with other groups our group becomes disillusioned, this spirit of superiority acquires a very narrow character and a clique is formed. Girls rise to the level of loyalty to a small group and tend to remain on that level, because of lack of competition between groups, while boys get over their clannishness by competition with other groups.

The relationship of the clique spirit to *esprit de corps* is thus evident. *Esprit de corps* is a sentiment that does not exist until the group is formed, but it appears with the group and is one of the strongest forces holding the group together.

Another psychic force peculiar to the group, and of particular importance as a product of club organization, is honor. Simmel shows the intermediacy of honor between morality and criminal law as a determinant of conduct. Morality is the personal standard of behavior; criminal law is that standard required as a minimum by the state. The code of honor is set by the small social group and is different for different groups (69, p. 680-82). The more firmly established the group and the more individual its character, the stronger is the hold it has upon the conduct of its members.

There is a close relationship between *esprit de corps* and honor. In intensity the correlation is direct. The stronger the feeling of attachment the individual has for the group, the more is he bound to conduct himself in accordance with the code of the group. In clubs of long standing, such as the Masonic Order, the code of honor is often of greater strength than is that of morality, when, for example, lodge brothers are shielded from punishment for infractions of law. It is not generally the rule, however, that honor and morality are antagonistic; they usually supplement and reinforce each other. One of the most common features of honor among clubs is this rule which demands that fellow members be assisted in times of adversity, sickness or death in the family, be supported when running for office in the community, be defended from calumny and, as in the case cited above, be shielded from justice. It is not honorable to 'snitch,' or inform the authorities, when one of the gang has done wrong. The gang have their own standards of conduct which concern the essential features of their mutual relationships, and to transcend one of these rules is often to lose membership in the gang. So it is with the 'honor of a gentleman.' To fail in any of its tenets is to lose caste in that fraternity. In some sections of the country the *esprit de corps* of the group of 'gentlemen' is as strong as that of a sworn brotherhood. Professional honor is particularly strong among physicians. Through this unwritten code incompetent physicians who, because of their ignorance, carelessness or lack of skill, fail to save the lives of their patients, are allowed to continue practicing because no one of their gild will expose them. Another point in their code is the rule of secrecy regarding disease which permits undesirable marriages. In the profession of law the code of honor is formulated in written rules. It is acknowledged by this code that a lawyer may undertake with propriety the defense of a person accused of crime, although he knows or believes him guilty. As an individual member of society governed by the standards of morality the lawyer believes this guilty man should be punished; as a lawyer, governed by the standards of honor in his profession, he is bound to exert himself to the utmost to prevent the fulfillment of justice. So each well organized club and each well defined social group has its code of honor. Reacting upon the club the effect of honor is to strengthen the ties that bind it together; as to its influence upon the social organism as a whole we need not here lay emphasis. Few moralists, however, have recognized how large that influence is in determining conduct.

Another factor, the effect of which is to solidify the once formed group, is friendship. To be sure, in children's clubs a condition of friendship exists before the club is formed. This is not always the case with adults. When such a group forms a club, friendship arises as a result of association in a common task. Jones has called this emotion the feeling of attachment (45, p. 60-79), which is another expression for the feeling of belonging, which was made the basal element in *esprit de corps*. This sociological mode and that of friendship have the same psychological foundation. As Cooley puts it: "Group sentiment, in so far as it is aroused by definite images, is only a variety of personal sentiment" (18, p. 79). Being admitted to a club arouses a feeling of attachment for the group; in a similar way, though to a more intense degree, being admitted to the confidence of another person arouses a feeling of attachment. Jane Addams says that: "no two persons, nor group of persons can come into affectionate relationship with each other unless they carry on together a mutual task" (4, p. 271).

The origin of personal affection is to be found in the relationship of mother and child, as Sutherland has proved with a wealth of data (79). Love is developed through service. Ribot states it in this way: "It is an observed fact that a man attaches himself to another in proportion to the service he renders, rather than to those he receives from him" (63, p. 294). However the feeling of attachment may arise, its intensification is accomplished by the same process the race experienced, namely in service. Service has another effect, moreover, which it is important to consider in this connection. The mental process of doing things for another person develops not only a feeling of attachment for that person, but a subordination of self to that person. So also when one works for a group or for a cause. Thus friendship and *esprit de corps* each presuppose an *Einstellung* that is characterized by unselfishness. It therefore becomes made more evident that these two forces do have a powerful influence in the preservation of the club. These mental processes are the *sine qua non* of co-operation.

In this connection the relationship of chumship (if we may be permitted to coin the term) and the club is *en rapport*. Bonser's study of this type of friendship showed that chumming begins before four years; with girls the age of greatest frequency is six; with boys the curve rises more slowly, reaching its apex at ten. These friendships, as a rule, continue unbroken at least until the latter high school years, which was the age of the boys and girls when they reported. This shows that the feeling of attachment for individuals appears earlier than for institutions or groups. There appears to be no conflict between the institutions of chumship and the club. Bonser found the existence of chumships almost universal. The great majority of children also belong to clubs. The general situation would appear to be as it is described by one reporter: "Every girl has her special friend, some one to whom she tells everything. They can have fine times together, but if they belong to a club and make friends with the other girls, they have many friends besides each other."

Chap. IV. Other Mental Forces which Aid the Continuation of the Club

Aside from those dynamic processes which produce the club, and aside from the forces which owe their existence to the club, there are other forces which, if present, favor the continuation of the club's life, viz., those that appeal to fundamental human needs, furnish expression to native impulses or satisfy instincts. The discussion of the more important of these forces, as employed by the club, is the task of this chapter; love of the mysterious, the satisfaction of positive self-feeling, acquisitiveness and curiosity by secrecy and ritualism; satiating the desire to realize the ideal through the dramatic features; satisfaction of religious and altruistic tendencies in philanthropic and religious activities; fulfilling the demands for recreation and physical exercise through athletics, sports and games of chance and skill; and answering these and other needs by the flamboyancy of big titles, benevolence and life insurance, literary, art and musical features. Clubs may consciously aim to satisfy these needs or may do so incidentally; they may plan deliberately to accomplish these ends, or they may accept these features as the force of contagion. Again the same activity may satisfy different needs in different individuals or groups. Secrecy, for instance, plays a distinctly different rôle in the fraternal order to-day than it played in the heretical sects of the Reformation. The need of protection, moreover, is more fully satisfied by secrecy in the *Camorra* or any anti-social organization to-day than it is in the Masonic Order.

For the sake of clearness it will prove more effective to centre the discussion about the different activities and practices of clubs than to discuss the different instinctive tendencies separately. The first of these to be treated is secrecy. Historically the principal rôle of secrecy has been the provision of protection to the members of an order joined together for some motive opposed by the powers, or by some power strong enough to be given attention. In modern society some of the best examples are given by the secret societies organized for the purpose of discussing heretical beliefs about religion, politics, philosopy and science, such as *Der Palmbaum*, the Anabaptists, Waldensians and the orders of the *Illuminati* (17 and 37). In America to-day there is no need of secrecy in order to avoid suppression of religious, political or intellectual societies. The anti-social clubs of thieves, pickpockets, tramps and other outlaws are the only organizations in which this human need is supplied by secrecy. Criminology furnishes a great variety of usages of secrecy as a means of protection. Havelock Ellis gives illustrations of the type of slang or argot used, which is peculiar to their class, and entirely unintelligible to any but those in the bond (25, p. 161-69). Gross in his Kriminal-Psychologie refers to the use of *sprachliche Missverständniss*, a use of language in such a way that the hearer knows that the meaning is something other than that spoken, and the speaker knows that the hearer will understand him as meaning something different than what is said (33, p. 383). The Handbook of Criminal Investigation (32) describes the disguises, false names, pretended illnesses, signs and signals, slang, ciphers, secret writings and graphic signs, used by criminals and tramps.

But secrecy is still a very prominent element in many of our clubs, among both adults and children. This suggests that it serves other needs than protection. One of these which it feeds is positive self-feeling. On this point, Simmel, who has given us the best discussion of the sociology of secrecy, says: "There is separation from others because there is unwillingness to give oneself a character common with that of others, because there is a desire to signal one's superiority as compared with these others. . . As a consequence of the fact that those who want to distinguish themselves enter into combination, there results an aristocracy which strengthens and, so to speak, expands the self-consciousness of the individuals through the weight of their own sum. . . We may observe, even in school classes, how small, closely attached groups of comrades, through the mere formal fact that they form a special group, come to consider themselves an élite, compared with the rest who are unorganized; while the latter, by their enmity and jealousy, involuntarily recognize that higher value. In these cases secrecy and pretense of secrecy (*Geheimnistnerei*) are means of building higher the wall of separation, and therein a reinforcement of the aristocratic nature of the group" (76, p. 486-87). Simmel would give a different account of the development of the clique than seems to us to be its genetic history, but his emphasis of secrecy is very patent. An illustration of what Simmel describes is provided in this description of a ten year old girl's club: "We were very select and had many secrets which we were sure to mention when there was any one around whom we wanted to make jealous." That is, positive self-feeling, in the form of a feeling of superiority is satisfied. But this reveals the fact that the secret has intrinsic value, which fact introduces another element.

Acquisitiveness, or the desire to possess, is tickled by the possession of a secret. To have a secret is to have something some one else wants and therefore it is of some worth. Sometimes the whole value of a secret is the fact that those outside the compact do not know it and want to. That is, curiosity is aroused, and anything that arouses curiosity is of value, as the proprietors of dime museums and side-shows well know. 'The people like to be fooled;' that is, they know that they will be made to feel foolish, but their curiosity is so strong they cannot resist the temptation to satisfy it. Children unconsciously recognize this when they invent sign languages, peculiar gestures of the hands, carry on nonsense gibberish and unintelligible whisperings. An instance of this kind was recorded above.

To answer the question: why does the secret arouse curiosity? is to disclose the primary source of value, namely the love of the mysterious. As shown by the mystic in religious, by spiritism, telepathy, slight of hand and conjuring, the mask ball and ghost stories and fairy tales, the love of the mysterious is a strong motive power. It is this which furnishes the energy which runs most of the machinery of secrecy. As it works out, it involves other fundamental tendencies; first, curiosity, which becomes involved in acquisitiveness, and this in positive self-feeling.

The different stages of this process are illustrated by these examples: The illustration referred to above shows the love of the mysterious. This report shows the value of it in holding the club together. "The first club to which I belonged was composed of five little girls. Each member wore a badge of blue and yellow ribbon. It was a secret society. We met in the afternoon after school and just had a good time enjoying games and other amusements. This club only lasted three weeks because some of its members, who were six and seven years of age, made the secret known to the public in general." In many cases the content of the secret is of no importance. The first thing to appear is the fact of the secret; afterwards the secret acquires content. The that is at first of more importance than the what. This is illustrated in a club of girls nine and ten years of age. "About six or seven of us who always played together wanted to have a secret. This part was voluntary, but we could n't think of a nice enough secret, so one of our mothers suggested that we should always be good friends. The rest was all voluntary such as wearing little bows and having parties. I think this lasted about a year." The same condition is very nearly paralleled in the adult organization. Joseph C. Root founded and wrote the ritual for two absolutely distinct secret societies, the Modern Woodmen of America and the Woodmen of the World, and was also a member of the Odd Fellows, the Knights of Pythias, the United Workmen, the American Legion of Honor, and was a thirty-second degree Scottish Rite Mason. It is quite evident that the content of the ritual is of less importance than the fact that there is one. The ritual is a secret, the possession of which makes the order richer in its assets. Freemasonry itself owes not a little of its prestige to the profoundness of its secrecy. Yet in progressive Masonry the roll of membership, its purposes and acts are public property; silence is required solely in regard to its sacred rites. The same thing is true of student societies. Sudermann in the drama, "Der Sturmgeselle Socrates," tells a fine story of a group of men who continue in their old age to get immense satisfaction out of a secret society formed during their student days. Then there was reason for the secrecy; now it is absolutely unnecessary, and yet it constitutes the chief *raison d'être* of the club. Stevens describes over thirty occult, hermetic, theosophic or religious brotherhoods in which the love of the mysterious plays the most important rôle (76). The very naming of college societies feeds the love of mystery, as illustrated by the Greek letters, the 'Skull and Bones' and 'Scroll and Key.'

The next step in development in the usage of secrecy is taken when it becomes used to satisfy acquisitiveness.

This is illustrated in its primitiveness by the following:

"When I was about nine years old, five girls and myself formed a club. It was known as the Contrary Girls Club, or C. G. C. Our main object was to get as many secrets as we could during the week, and then on Saturday afternoon we would meet and tell our secrets. The ones we considered the most important we would give some certain initial or initials, and then record them in a book."

It is then but a step from this stage to that characterized by the aristocratic feeling, the latter being the feeling of being better than the other fellow, the former being the desire to possess. The former is therefore the servant of the latter, since in our society rank is correlative with possession. The desire to possess something of value, be it nothing more than a secret, may thus be in motivation subordinate to the desire to rise in social rank. This is illustrated in student fraternities. Not their only feature, to be sure, and in the published intention not at all present, are those two motives. But in actual practise it works that way. The fact that a society is secret makes it stand out prominently in the foreground of the desirable social states. And this prominence encourages aristocracy. When the experience of the individuals thus raised into prominence has been broad enough to have toned down their primeval feeling of superiority, both in regard to themselves and to their group, the effect is good; if, on the other hand, this rise into prominence be made by less mature or less experienced minds, the effect on their view of the world is detrimental. The former is the aristocracy which should be emulated, the evolution of a group to a higher cultural plane; the latter is the false aristocracy which exhibits itself in snobbishness, bigheadedness and in extreme cases, megalomania. We find here the psychological reason why fraternities are detrimental in high schools. Boys and girls are too young, as a rule, to be able to experience the feeling of superiority, engendered by the prominent position which is the result of secrecy. This prominence, too, is extraordinarily increased because the other students are of the same age as the members of the fraternity, and their envy of the members of the secret organization is stronger than it would be at any other period of life. The same snobbishness, however, is produced by victory in athletics. Where fraternities exist the condition is made worse because of the fact that the man placed in an enviable position through athletic prowess is the most desirable candidate for the fraternity, and the cumulative resultant is a snob of the choicest variety, unless he be equaled by the snob of newly acquired wealth. Approximately the same importance is given to athletics and social life in college as in high school, but the effect in college is much less aggravating, because of the greater maturity of the students. The high school boy, who has been the easy victor in all contests, on entering college learns that there are others just as fleet, just as clever, and in all probability a few who are even brighter. A few defeats cures his youthful self-regard. In adult life, entrance into a secret order does not, as a rule, produce this deleterious effect of the high school age, because men are then old enough to be able to experience prominence without becoming conceited, and also because the prominence is less, on account of the ease with which men can become members of secret orders.

It should be mentioned that while the prominence of secrecy in children's societies is due to these fundamental human needs which are satisfied, the form that secrecy takes is due largely to contagion. By far the greater part of the secret features here found are the result of imitation. Many have secret names, passwords, rituals, secret signs and other mysteries as a result of the fact that they know adult clubs have them.

Dramatic Features. Closely allied with the secret elements of the club are the dramatic features. By the dramatic features we mean all those attributes which appeal to the love of the make-believe. We need not delay to emphasize the fact that the pleasure in the make-believe, whether the subject takes part in the acting, or merely witnesses the acting of others, is an universal one. Miss Addams points out in a charming way the place this craving holds in adolescence, and that the reason why it is so exceedingly strong among the workers of the city is that the drama provides a transition between the romantic conceptions which they vainly struggle to keep intact and life's cruelties and trivialities which they refuse to admit. The satisfaction of the make-believe in the form of reading and reverie is denied them. But on the stage the youth can witness the deeds of his hero presented before his eyes; these he views simply as a forecast of his own future. This fascinating view of his own career it is which draws the boy to shows of all kinds (3).

The club to some extent satisfies this need. It provides a great hierarchy of offices and degrees.

> Europe has its pageantry and titled nobility, its Order of the Bath and Garter, the Legion of Honor and Iron Cross. Americans satisfy this underlying human need by parades of Knights Templars, Elks and Odd Fellows, in which thousands put on sword and silk and scarf. They create for themselves such titles as Official Potentate, Imperial Deputy Potentate, Imperial Chief Rabban, Imperial High Priest and Prophet, Imperial Oriental Guide, Imperial First Ceremonial Master, as in the Nobles of the Mystic Shrine; the Grand Exalted Ruler, High Chief Ranger, Keeper of the Exchequer, Grand Almoner, or, as in the Imperial Order of Red Men, the Grand Incohoner, Great Senior Sagamore and Great Keeper of the Wampum. These titles, representative of hundreds, are well ridiculed in the following offices: Cock of the Walk, Bantam Cock, Chief Scratcher, and Early Bird, in the Order of Red Roosters, and Most Loyal Gander, Grand Custodian of the Goslings, Supervisor of the Flock, Grand Guardian of the Pond, and Grand Wielder of the Goose Quill, in the Order of the Red Goose. The love of the make-believe underlies the organization of the Concatenated Order of Hoo Hoo, the Prudential Patriarchs of Pompeii, the Knights and Ladies of the Golden Star and many others that might be mentioned.
>
> Examination of the rituals, based on secret and secular themes, such as the story of the cross, building of the temple, David and Jonathan, Joseph, the Maccabees, Ben Hur, facts of United States history, nomad life, the friendship of Damon and Pythias and the crusades are used to increase both

the mysterious and the dramatic elements in the club organization. Commenting on the ritual, Simmel says: "Every such society (a secret society with a ritual) contains a measure of freedom, which is not really provided for in the structure of the surrounding society. Whether the secret society, like the *Vehme* complements the inadequate judicature of the political area; or whether, as in the case of conspiracies or criminal bands, it is an uprising against the law of that area; or whether, as in the case of the 'mysteries,' they hold themselves outside of the commands and prohibitions of the greater area—in either case the apartness (*Heraussonderung*) which characterizes the secret society has the tone of a freedom" (70, p. 483). In other words, the secret society with its ritual transcends the humdrum, hard and fast facts of everyday life, and forces open the gates into the realm of the ideal, the world of the imaginative, the make-believe. Read over the names of the degrees in Scottish rite Freemasonry, from the highest level of Sovereign Grand Inspector General down through the thirty-three stata, some of which are, Sublime Prince of the Royal Secret, Grand Elect Knight Kadosch, Knight of the Brazen Serpent, Patriarch Noachite, Knight of the Rose Croix, Prince of Jerusalem and Grand Elect Perfect and Sublime Mason.

Forbush recognized this need, when he organized the Knights of King Arthur for boys, with their round table, their formality, ritual and titled officialdom (26). Consciously or unconsciously the Boy Scouts recognize it in their provision for hero-worhip, for playing at Indian life, at military drill and first aid to the injured. These activities satisfy the 'dramatic instinct.' Labor unions have introduced many of the features of the secret brotherhoods, such as 'riding the goat,' high sounding titles ritual, passwords, etc. Their fundamental purpose certainly has no connection with satisfying the dramatic instinct. In actual practise it is found that those unions are most successful which minister most widely to the needs of its members. Among these is the demand of the dramatic instinct.

Walter B. Hill calls the institution of the club the great American safety-valve (39). The teaching of our public schools is that any man may become president, when as a matter of fact they can't all be presidents. Hill says: "I made a test case of a small town, and found that every man, woman, and child (above ten years of age) in the place held an office—with the exception of a few scores of flabby jelly-fish characters, whose lack of ambition or enterprise removes them from consideration as elements of the problem. . . Here then we have the great American safety-valve—we are a nation of presidents." Holding office satisfies the love of the make-believe, and incidentally, as other drama does, it trains for the real.

Besides these indirect ministrations to the call of the make-believe, it is directly satisfied in all sorts of clubs by participation in the presentation of drama, readings and entertainments. By these dramatic features clubs increase their influence and perpetuate their life.

Other Features. The quotation from Mr. Hill introduces us to another set of factors used by the club. Holding office not only satisfies the dramatic impulse, but it is a sort of subtle flattery; it gives a realization of greatness, through cajoling positive self-feeling. The more flamboyant the titles, the more the feeling of superiority is tickled. This is not identical with the love of the make-believe, as is shown by the fact that there is satisfaction in playing the villain. Other means of adding to the satisfaction of this self-centered feeling are the addition of those agencies which actually do improve the individual status, financially, socially, intellectually, morally, etc. The beneficiary and insurance features directly improve financial status. Membership in fraternal orders, as well as in religious and social clubs, is oftentimes sought purely to improve one's business connections. Social status is acquired by the same means. And here we class the purely social clubs. Self-improvement is made a strong motive for joining the club, by its provision of education specifically in literature, art, drama, music and physical culture, and more generally in every subject of interest through the intercourse of conversation, discussion and set lectures. Thus the club aids the individual to gain a living, to improve his social status and to raise his general efficiency.

It might be a matter of debate whether the religious and altruistic elements in clubs should be classed with those in the preceding paragraph, or whether they should be treated as satisfying an impulse, distinct from that of positive self-feeling. We will not argue that point. The fact remains that the club does in many ways satisfy the needs expressed by these feelings. The religious and philanthropic societies do this directly; the fraternal societies have many religious elements, for instance the Masons, the Knights of Malta, and the Odd Fellows, whose motto is 'Friendship, Love and Faith.' Another feature of the club, about which there is similar difficulty of classification is the recreative, the provision of muscular exercise, mental relaxation, and games of chance or skill. The characteristic of this group of activities is the hygienic element. The result is self-improvement, yet the feeling satisfied is different in each case. Here, too, there are clubs formed entirely for athletics, as there are found those primarily altruistic and social. Every club which has a building or grounds of its own aims to satisfy this type of need.

But the club also satisfies at least one other instinct. Constructiveness is well fed in the activities of such men as Root, Clendenen, Upchurch, and the other organizers and ritual writers. There must glow in the breast of these constructive geniuses some such fire as Pres. Hall ascribes to the novitiate into the class of contributors to science after the production of his doctor's thesis. There is surely a peculiar joy that comes from the successful formation of a new organization, and a great many thousands have had the privilege of being charter members of clubs of all kinds in the last few decades.

Another force unconsciously employed by the club, which has the effect of strengthening the group spirit, is that of opposition and conflict.

Struggle is a stimulus to growth. The mind, like the body, needs continual peripheral stimulation to keep awake. One of the chief services of the school examination is that it is a continual spur, keeping one at the height of working capacity. It brings the realization of the possibility of failure, and the desire to succeed and excel makes a conflict, a game, a contest of study, with big obstacles to overcome. Similar is the effect produced by the effort to attain some definite end, whatever be its nature. To have a purpose, whether it be to build up a business, to support a family and raise children, to excel in the profession, to have a real work to do gives zest to life and increases efficiency. This much is true of opposition in its effect on the individual.

Opposition to a group from without has a similar effect. Persecution always strengthens the ties between those oppressed. Minor differences are overlooked in the light of the greater need which cries out for unity. Some families can only be united by sorrow in the death of one of their number, or by some other great calamity, such as a scandal, when, as with political opponents, there is unity in the face of foreign war. External opposition has the effect of throwing into relief the stronger *esprit de corps*.

This is clearly seen with fraternities, particularly those among high school students. The feeling of unity among the members is only magnified by the fact that they have a common enemy who would destroy their club. Persecution of a religious sect strengthens it, unless it be strong enough to annihilate it, not merely because opposition gives more meaning to the religion, but also because it draws the members into closer fellowship.

A different psychic process is involved when there is antagonism between the members of the group. If this is too strong the group is broken up. But in moderate degrees it has the effect of strengthening it by providing what Simmel calls "one of those contrast-stimuli evidently demanded by the innermost needs of the unifying social bond, because there, as elsewhere, the permanent can emerge and come to conscious force only as a function of the changeable" (69, p. 48). This is as true of the social bonds existing between individuals as those binding large numbers. Periods of quarrel and disagreement seem to be a regular experience of lovers and of married couples. These estrangements are followed by reactions when the bond of unity is stronger than before the quarrel, the effect of the quarrel being to bring into consciousness the realization of the misery which would ensue if the bond were permanently broken, against which dark background is thrown the bright picture of the happiness which characterizes their union. The psychic process appears to be the same with the members of a club. Difference of opinion regarding policies is necessary for the purpose of making definite the real object of the organization. The club would die of stagnation, as many churches in fact do, were there no differences between its members.

GENERAL SUMMARY

The description of the psychological elements utilized by the club has involved at least the mention of most of the social qualities possessed by man. The club in present day America is indeed a broad institution. Its broadest foundation is laid in sociability. Whether or not other sentiments are involved, this is always present. Unsociable individuals never form clubs. Sociability is therefore the most fundamental of all the forces which produce the club. It may be supplemented either by contagion or deliberation or both. Either combination will produce the club. Other forces may assist, such, for instance, as the feeling of personal attachment between individuals, but this is not essential. These being the forces, there are certain conditions necessary before their functioning will produce the club, those conditions being individual differences in the capacity for leadership and congeniality of interests. The club being organized begets other psychic forces of which we have discussed the social stimulus, *esprit de corps*, honor, and friendship. Besides these forces, clubs, either by their nature, or unconsciously, employ other factors which, by appealing to native tendencies, strengthen the club; such factors as secrecy, ritualism and dramatic features, agencies for self-advancement, financially, in status and in efficiency, religious and altruistic features, the provision of possibilities of recreation, athletics, games and amusements, and the force of opposition. Though the aim of this paper has been to make a contribution to the science of social psychology, it is hoped that, if the conclusions herein reached be valid, they may be of some suggestiveness to all who are interested in the formation of clubs, whether formed by any group for their own ends, or by adults for boys and girls.

BIBLIOGRAPHY

1. ADDAMS, JANE. Democracy and Social Ethics. Macmillan, N. Y., 1907, 277 p.
2. ——— ———. Newer Ideals of Peace. Macmillan, N. Y., 1907, 437 p.

3. ADDAMS, JANE. The Spirit of Youth and the City Streets. Macmillan, N. Y., 1909, 162 p.
4. ———. Twenty Years at Hull-house. Macmillan, N. Y., 1910, 462 p.
5. ALDRICH, T. B. The Story of a Bad Boy. Houghton, Boston, 1897, 261 p.
6. BAIRD, W. R. Baird's Manual of American College Fraternities. Alcolm, N. Y., 1907, 574 p.
7. BALDWIN, J. M. Social and Ethical Interpretations of Mental Development. Macmillan, N. Y., 1897, 606 p.
8. ———. The Individual and Society. Badger, Boston, 1911, 210 p.
9. ———. The Basis of Social Solidarity. *Am. Jour. Sociol.*, 1910, vol. 15, pp. 817-31.
10. BLACK, HUGH. Friendship. Revell, N. Y., 1898, 237 p.
11. BONSER, F. G. Chums; a study in youthful friendships. *Ped. Sem.*, 1902, vol. 9, pp. 221-37.
12. BROWNE, T. J. Clan or Gang Instinct in Boys. *Association Sem.*, 1900, vol. 9, 65 p.
13. BURNHAM, W. H. The Group as a Stimulus to Mental Activity. *Science, N. S.*, 1910, vol. 31, pp. 761-67.
14. ———. The Hygiene of Home Study. *Ped Sem.*, 1905, vol. 12, pp. 213-30.
15. CALKINS, M. W. A First Book in Psychology. Macmillan, N. Y., 1910, 419 p.
16. Carnegie Institution of Washington. Handbook of Learned Societies and Institutions. 1908, 592 p.
17. CONRADI, EDWARD. Academies and Learned Societies in Early Times. *Ped. Sem.*, 1905, vol. 12, pp. 384-427.
18. COOLEY, C. H. Human Nature and the Social Order. Scribner's, N. Y., 1902, 413 p.
19. ———. Social Organization. Scribner's, N. Y., 1909, 426 p.
20. CULIN, STEWART. Street Games in Brooklyn, N. Y. *Jour. of Am. Folk-Lore* 1891, vol. 4, pp. 221-37.
21. DARWIN, CHAS. Biographical Sketch of an Infant. *Mind, O. S.*, 1877, vol. 2, pp. 285-94.
22. DAVIS, M. M. Psychological Interpretations of Society. Longmans, N. Y., 1909, 260 p.
23. DEWEY, JOHN. Interest as Related to Will. 2nd Supplement to the Herbart Yearbook for 1895, Chicago, 34 p.
24. ———. Interpretation of Savage Mind. *Psych. Rev.*, 1902, vol. 9, pp. 217-30.
25. ELLIS, HAVELOCK. The Criminal. Scribner's, N. Y., 1890, 327 p.
16. FORBUSH, W. B. The Boy Problem. Pilgrim Press, Boston, 1907, 210 p.
17. ———. The Social Pedagogy of Boyhood. *Ped. Sem.*, 1900, vol. 7, pp. 307-46.
28. GALTON, FRANCIS. Inquiries into Human Faculty. Macmillan, London, 1883, 387 p.
29. GIDDINGS, F. H. The Principles of Sociology. Macmillan, N. Y., 1909, 476 p.
30. GILLIN, J. L. A Contribution to the Sociology of Sects. *Am. Jour. Sociol.*, 1910, vol. 16, pp. 236-53.
31. GROOS, CARL. The Play of Man. Appleton, N. Y., 1901, 412 p.
32. GROSS, HANS. Criminal Investigation. A Practical Handbook. Specialist Press, London, 1907, 889 p.
33. ———. Kriminal-Psychologie. Vogel, Leipzig, 1905, 701 p.
34. GULICK, L. H. Psychological, Pedagogical and Religious Aspects of Group Games. *Ped. Sem.*, 1899, vol. 6, pp. 135-51.

35. HALL, G. S. Adolescence. Appleton, N. Y., 1907, 2 vols.

36. ——. The Story of a Sand-Pile. *Scribner's Mag.*, 1888, vol. 3, pp. 690-95.

37. HARTSON, L.-D. A Study of Voluntary Associations, Educational and Social, in Europe During the Period 1100-1700. *Ped. Sem.*, 1911, vol. 18, pp. 10-31.

38. HAUPTMANN, G. Lonely Lives, A Drama. Heinemann, London, 1898, 179 p.

39. HILL, W. B. The Great American Safety Valve. *Century*, 1892, vol. 22, pp. 383-84.

40. HOLLANDER, J. H. and BARNETT, G. E. Studies in American Trade Unionism. Holt, N. Y., 1906, 380 p.

41. HOWELLS, W. D. A Boys' Town. Harper, N. Y.

42. HUTTON, L. A Boy I Knew and Three Dogs. Harper, N. Y., 1898.

43. JAMES, WILLIAM. The Principles of Psychology. Holt, N. Y., 1890, 2 vols.

44. JOHNSON, J. H. Rudimentary Society Among Boys. *Hopkins Studies in Hist. and Pol. Sci.* Baltimore, 2nd series, 1884, 51 p.

45. JONES, J. W. L. Sociality and Sympathy. *Psych. Rev. Supplements*, 1903, vol. 5, no. 18, 91 p.

46. KIRKPATRICK, E. A. Fundamentals of Child Study. Macmillan, N. Y., 1907, 384 p.

47. KROPOTKIN, P. Mutual Aid a Factor of Evolution. Heinemann, London, 1902, 348 p.

48. LEE, JOSEPH. Play as a School of the Citizen. *Char.*, 1907, vol. 18, pp. 486-91.

49. MCDOUGALL, WM. An Introduction to Social Psychology. Methuen, London, 1908, 355 p.

50. MCGEE, ZACH. A Study in the Play Life of Some South Carolina Children. *Ped. Sem.*, 1900, vol. 7, pp. 459-79.

51. MAXWELL, W. H. Twelfth Annual Report of the City Superintendent, City of New York, 1910, 656 p.

52. MAYER, AUGUST. Ueber Einzel-und Gesamtleistung des Schulkindes. Sammlung von Abhandlungen zur Psychologischen Pädagogik, 1. 4. Leipzig, 1904.

53. MEUMANN, E. Haus-und Schularbeit. *Die Deutsche Schule*, June, 1904, pp. 337-59.

54. MEYER, B. F. Fraternal Beneficiary Societies. *Am. Jour. Sociol.*, 1901, vol. 6, pp. 646-61.

55. MORRISON, G. B. Report of Committee on Fraternities. *Proc. of N. E. A.*, 1905. pp. 445-51.

56. MUMFORD, EBEN. The Origins of Leadership. Univ. Press, Chicago, 1909. 87 p.

57. N. Y. State Dept. of Labor Bulletin, 1910, vol. 12, no. 45.

58. O'SHEA, M. V. Social Development and Education. Houghton, Boston, 1909, 561 p.

59. PEREZ, BERNARD. The First Three Years of Childhood. Bardeen, Syracuse, 1889, 294. p.

60. PREYER, J. A. Mental Development in the Child. Appleton, N. Y., 1893, 170 p.

61. PUFFER, J. A. Boys' Gangs. *Ped. Sem.*, 1905. vol. 12, pp. 175-213.

62. RATZELHOFER, G. Die Sociologische Erkenntniss. Brockhaus, Leipzig, 1898, 372 p.

63. RIBOT, TH. The Psychology of the Emotions. Scribner's, London, 1898, 455 p.

64. RIIS, J. A. How the Other Half Lives. Scribner's, N. Y., 1890, 304 p.

65. ROSS, E. A. Social Control. Macmillan, N. Y., 1904, 463 p.

66. SCOTT, J. H. The Social Instinct and its Development in Boy Life. *Association Sem.*, 1905, vol. 13, 46 p.

67. Sheldon, H. D. Institutional Activities of American Children. *Am. Jour. Psych.*, 1898, vol. 9, pp. 428-48.

68. ——— ———. The History and Pedagogy of American Student Societies. Appleton, N. Y., 1901, 366 p.

69. Simmel, Georg. The Persistence of Groups. *Am. Jour. Sociol.*, 1898, vol. 3, pp. 662-98; pp. 829-36; vol. 4, pp. 35-50.

70. ——— ———. The Sociology of Secrecy. *Am. Jour. Sociol.*, 1906, vol. 11, pp. 441-98.

71. Slosson, E. E. Great American Universities. Macmillan, N. Y., 1910, 528 p.

72. Schmidt, Friedrich. Experimentelle Untersuchungen über die Hausaufgaben des Schulkindes. 1, 3. Leipzig, 1904, 120 p.

73. Smith, S. R. Report of the Committee on the Influence of Fraternities in Secondary Schools, *School Rev.*, 1905, vol. 13, pp. 1-10.

74. Spectator, The. *The Outlook*, 1907, vol. 87, pp. 769-70.

75. Stanton, E. C., Anthony, S. B., and Gage, M. J. History of Woman Suffrage. Mann, Rochester, 1889-1902, 4 vols.

76. Stevens, A. C. The Cyclopedia of Fraternities. Treat, N. Y., 1907, 444 p.

77. Sudermann, Hermann. Der Sturmgeselle Sokrates. Cotta, Stuttgart, 1903, 170 p.

78. Sully, James. Studies of Childhood. Appleton, N. Y., 1896, 527 p.

79. Sutherland, A. The Origin and Growth of the Moral Instinct. Longmans, London, 1898, 2 vols.

80. Tarde, Gabriel. The Laws of Imitation. Holt, N. Y., 1903, 404 p,

81. Titchener, E. B. A Textbook of Psychology. Macmillan, N. Y.. 1910, 558 p.

82. Tolstoi, L. War and Peace. Complete Works. Crowell, N. Y., 1898, 6 vols.

83. Triplett, N. The Dynamogenic Factors in Pace-Making and Competition. *Am. Jour. Psych.*, 1898, vol. 9, pp. 507-33.

84. Varendonck, J. Les Sociétés D'Enfants. A questionnaire. *Arch. de Psychologie*, 1910, vol. 9, pp. 134-38.

85. Warner, C. D. Being a Boy. Houghton, Boston, 1889. 244 p.

86. Whitcomb, C. T. C. Report on Organizations among High School Students. 69th Mass. Report of Education, 1904-05, pp. 180-98.

87. Woods, Robert. The City Wilderness. Houghton, Boston, 1909, 319 p.

88. World Almanac and Encyclopedia. Press Pub. Co., N. Y., 1911, 816 p.

89. Y. M. C. A. of Mass. and R. I. Report of the Committee on Fraternity and Social Life in High Schools. MS., 1909, 25 p.

BOOK NOTES

Principles of Education, by FREDERICK ELMER BOLTON. New York, Charles Scribner's Sons, 1910. xii, 790 p.

The author in his preface states that he feels the need of a book on educational principles. He gets this view from ten years actual classroom experience in teaching the subject. The text is not meant to give recipes for ailments in our educational system; it is rather to produce an interest for beginners in the study of educational science. The author has not tried to make a book to suit the "logic chopper," nor to lay down principles in their abstract forms; for the beginner cannot understand them and the advanced student does not need them set down in a book. In the introductory chapter he gives the general principles of his scheme; through the succeeding 27 chapters he develops them more fully.

First, the popular view of education,—book facts, formal drill, and discipline,—is far too narrow. The new interpretation is that education elevates or debases, and that many factors enter in, to determine the education a child receives. The home training, plays, games, sports and pastimes are very important in bringing out latent capabilities and stimulating new ones. "In determining a boy's moral attitude and action the neighborhood environment and the neighbors' boys are far more influential than the school." (p. 3.) The farm, because of its immediate and prolonged contact with nature, offers the best possible preliminary nourishment for the understanding and appreciation of science, literature and art. The playground function as an educational factor is just beginning to be realized. Some of our school work and formal education may become obsolete, but play never does.

The school is relatively a new institution. Its aim is to aid preparation for complete living. Education began long before the school came. The rise from savagery to civilization was throughout an educational process. In fact, nature assigned the lessons and gave the credits, man's food, clothing, amusements and intellectual advances, with the watchword *utility*, which should be the watchword of the schoolmaster. The school should be the guide, the standard bearer of the highest ideals of the present and the past; the child life, the central figure. The business of the educator is to maximize the desirable features and to minimize the undesirable features of inheritance (and environment, the reviewer suggests), and to initiate new tendencies.

The superlative problem is to influence mind to produce modification of the intellectual, emotional and volitional life. Thus the psychological aspects of education are given a relatively large space.

In the first seven chapters, based upon biological facts, the line of thought is well chosen, and the discussion abounds in good illustrations and suggestions. The remaining chapters contain many well developed points, a few examples of which are:

1. A knowledge of recapitulation (and child development) makes the teacher more sympathetic towards the restless and awkward child. At first, only coarser movements, then later, finer physical adjustments can be made. Observation should be the first mental work. Organization and scientific thinking must come later. (pp. 98-135.)

2. Teachers should watch for signs of fatigue, and avoid much strain, in order to accomplish most for the child. (p. 267.)

3. Have the pupil state new facts in his own words, thus making sure that he understands; also it will aid him in remembering the facts. He perceives, he apprehends, he remembers and is educated. (pp. 360, 392.)

4. The pupil needs time to think. He should think over and over each series of new facts. Teach effective thinking,—organize, hypothesize, and then verify. (pp. 383, 600.)

5. The above principle, if observed, creates a "headway of interest." (p. 612.)

6. A strong "headway of interest" in one's own activities usually prepares the way for interest in others, precedes altruism, morality, and society. (p. 677.)

Especial credit should be given for the chapter,—The Nature of Thinking. Every teacher and student would do well to read it.

Minor criticisms may be made: (1) that in a few places, *a*, the organization of the material is loose, *b*, the principle derived is not as clearly stated as it should be, sometimes no conclusion being stated; (2) a summary and concluding chapter of his most valued points should be given briefly, so that the reader may easily verify and review the notions he has gained from the reading; and (3) a volume of 800 pages should have more than a topical and author index.

More urgent criticisms are that quotations in some places are given without their proper setting, and not all arguments are carefully weighed; otherwise some would be omitted from this spacious text-book. An example of incorrect use of quotation is the one from Pierson (p. 196), to show that mental characteristics are inherited. It should be noted that Pierson took no account of environmental influences in the study here referred to, and thus the quotation cannot correctly be used as it is. Another example is the quotation from Brewer (p. 206) to inheritance in the trotting horse. It runs, that "in 1858, there were only six trotters in the 2.30 class, but in ten years, there were fully 150 in the 2.30 class. . . Now we began to have distinctly trotting blood, and heredity began to tell." The student may ask for knowledge of the ancestry of the 150. Did the ancestors acquire or possess the characteristics which the 150 exhibited, and which are claimed to have been transmitted to the 150? The quotation gives no answer to this question. Without it, can the reader accept the statement that "heredity began to tell?" The author has failed to give the reference to the above, a failure perhaps as serious as the weakness of the argument quoted. The discussion on nature and nurture is not thoroughgoing, and it leads to no conclusion. Since the author derives no principle of education from the discussion, and since the teacher's business is to influence the child through proper environment,—the only way possible,—this chapter of 50 pages should give place to a discussion of something else, say, the social aspects of education, or obedience in relation to education, topics which are missing in this volume.

The book, nevertheless, is one of the best. Teachers and students are pleased to have it at their command; for it contains a wealth of data, well incorporated for the most part, and it gives a present day setting to many of the best ideas known in educational science, due credit being given former educators for the facts they have left us.

E. O. Finkenbinder

Report of The Vice Commission of Minneapolis to His Honor James C. Haynes, Mayor. 1911. 134 p.

Among the subjects included in this investigation were the size and character of the problem of social vice in Minneapolis since closing houses in the sixth ward; the history of efforts to handle the problem; methods and policies tried in other cities; and fourthly, a group of related questions, such as supply, prevention, the theatre, penny arcades, moving pictures, sex education, etc. The commission discusses the question of legalization of prostitution; its toleration; medical inspection; methods in other cities; enforcement of law; and the conditions generally and locally favorable thereto and recommendations. The latter are, law enforcement; increased police vigilance; co-operation of citizens; regulations of down-town hotels and lodging houses; development of increased interest in public health and safety; prevention by education; recreation; economic conditions; travellers' aids; rescue and reform; and a permanent commission.

The individual in the making. A subjective view of child development, with suggestions for parents and teachers. By E. A. Kirkpatrick. Boston, Houghton Mifflin Co. 1911. 339 p.

In the first part, dealing with the principles of subjective development, the writer discusses personality and interest. In the second part, devoted to stages of development, after a general description he treats the presocial, the imitating and socializing stage, then the periods of individualization, of competitive, socialization and regulation, the pubertal and early adolescent period. The third part is devoted to the relation of stages of development to education, and treats of the function of education, of the aims, material and methods at different periods. The author has made abundant and profitable use of the very copious literature of child study, although he here deals essentially with its applications to the actual work of education. It is a book of even greater importance than those which the author has previously published.

The social composition of the teaching population, by Lotus Delta Coffman. Teachers College, Columbia University, Contributions to Education, No. 41. N. Y. Teachers College, 1911. 87 p.

From this study the writer concludes that the typical American male public school teacher, if described in terms of medians, is 29 years of age, began teaching a little under 20, with 3 or 4 years of training beyond the elementary school. In the 9 years between the time he began and the present he has had 7 years of experience and his salary now is $489 a year. Both parents were living when he began, with an annual farm income of $700, from which they had to support 3 or 4 children. The first 2 years were in a rural school at $390 per year. His salary increased until 26, after which age and experience had little effect upon it. The typical American female teacher is 24, having begun in the early part of her 19th year with 4 years training beyond the elementary school. She receives $485. Her parents had an annual income of $800, supporting 3 or 4 children, so there was pressure to earn her own way. She, too, began in the country, but went to town; but if in the city had to have another year of training. These are the teachers who are training the youth of the land.

The author's data were from questionnaires to teachers in 22 states, 75.6 % of whom were women. 5,500 answers were secured.

Progress through the grades of city schools; a study of acceleration and arrest, by Charles Henry Keyes. Teachers College, Columbia University. Contributions to Education No. 42. N. Y., Teachers College, 1911. 79 p.

This is a study of the quantity, place and causes of acceleration and arrest in the passage through the grades, made under Professor E. L. Thorndike's guidance in one supervision district of five thousand pupils in nine grades, of a cosmopolitan population, with one teacher on the average for forty-two pupils. He finds potential accelerates in from ¼ to ⅓ of all pupils above the first grade. The middle grades give the superior pupil the best chance. There are more boy than girl accelerates. The years of 8, 9 and 10 and the 3d, 4th and 5th grades have more than their share.

It runs in families. They attend most regularly. Arrest most commonly follows too early or late entrance. Pupils who do not leave before 15 or more have usually been repeaters. Irregular attendance, change of school, poor eyes, etc., help. 28% were weak in all subjects; 16 passed in nothing but spelling. Repeating a grade does not improve the scholarship. Arrest and accelerates must be accepted as permanent special classes. The various plans of remedy are defective because they accept a uniform curriculum and that slow and backward children are psychological and biological products. Work must be equal to power. The curriculum must be differentiated. It is not a trouble of method only. The worst is the fast boy who is made to go slowly. Thus "we need the consulting physiological psychologist. How shall we get him?" This is a most obvious and inevitable conclusion. He exists but the real question is how to get boards to employ and provide him with facilities for his work. Psychological training has gone much farther than the author of this paper seems to think in providing just such men although the training in the most favored universities is not yet quite adequate.

A special study of the incidence of retardation, by LOUIS B. BLAN. Teachers College, Columbia University, Contributions to Education, No. 40. N. Y., Teachers College, 1911. 111 p.

The author attempts to measure the relative frequence of non promotion in the grades of the public school by studying only the local beginners who have persisted in the present grades, in order to find the grade or grades where retardation was most common. The general result of this study seems to show that "the burden of proof rests on those who fancy that a pupil is more likely to suffer retardation in early than in late grades." The study is made with great care but the definiteness of its conclusion is somewhat disappointing.

The Hindu-Arabic numerals, by DAVID EUGENE SMITH and LOUIS CHARLES KARPINSKI. Boston, Ginn & Co., 1911. 160 p.

The general acceptance of Arabic numerals in commercial transactions is a matter of only the last four centuries and they are still unknown to a large part of the human race. The scheme struggled for nearly a thousand years after its system of place value was perfected before it replaced such crude notations as that of the Roman conquerors. This subject interests, therefore, not only the culture historian but the teacher and the business man. The story has often been told in part but here it is brought together in small compass and in a very interesting way.

L'arte d'être un homme. Traité de "self-education" a l'usage des jeunes gens, à partir de 16 ans, par l'ABBÉ H. MOCQUILON. Paris, Blonde et Cie, 1911. 468 p.

The author first describes the new life of youth, "fonctionnairism" commerce and industry, colonial relations, the industrial, military, artistic careers, agriculture, and the church. In the second part the writer treats of the general principles of practical life, country, family, marriage, and religion.

Fröhlicher Unterricht. Eine Auferstehung alter Grundsätze im Elementarschulwesen, von MAGDA BÖTNNER und EMMA VÖHL. Leipzig, Friedrich Brandstetter, 1910. 96 p. and 16 tables.

This is a vital work pointing out the present defects of elementary education and what the reforms should be. It sets forth mainly the rather well known Schrader ideas and tries to justify the modifications of Froebel that are involved. There are 16 full page tables of how the children do this work.

Spinoza as an educator, by WILLIAM LOUIS RABENORT. Teachers College, Columbia University, Contributions to Education, No. 38. N. Y., Teachers College, 1911. 87 p.

After three and a half centuries, Spinoza is more of a power than ever and it is well to seek out the educational implications in his philosophy. Although primarily a contribution to education, the author gives an outline of his views so that it is after all very largely philosophical, especially the chapters on the elements of human nature, the supremacy of the human intellect, and the complication of personality.

Enzyklopädisches Handbuch des Kinderschutzes und der Jugendfürsorge; herausgegeben unter Mitwirkung hervorragender Fachleute. TH. HELLER, FR. SCHILLER, M. TAUBE. Leipzig, Wilhelm Engelmann, 1911. Bd. 1, 371 S; Bd. 2, 416 S.

It is impossible to do justice to this very important and timely encyclopedia. The work is essentially German, not only in both the topics treated but in the literary references. It is very unfortunate that Anglo-Saxon work is so ignored.

Books and how to make the most of them, by JAMES HOSMER PENNIMAN. Syracuse, N. Y., C. W. Bardeen, n. d. 99 p.

How to use books, cultivating the memory, what to read and the abuse of books, art of reading, classification of books, poetry, biography, history, fiction, libraries and the care of books.

Universal peace—war is mesmerism. By ARTHUR EDWARD STILWELL. New York, Bankers Publishing Co., 1911. 179 p. Second edition.

The author wants nations to adopt an individual standpoint, thinks no one can grant a license to kill, discusses the relations of bankers to war, the relations of icons to mutiny, "interest payments on corpses and ghosts," what stands in the way, the army of peace, the promised day, injustice, Japan, who is on the firing line, the Monroe Doctrine, nations with colic, Diaz, etc.

La Puériculture sociale, by HENRI BOUQUET. Paris, Bloud et Cie, 1911. 322 p. (Études de Morale et de Sociologie.)

The first division treats of the crèche, the second of the pouponnieres, their rôle, personnel, budget, etc. The third part is on the consultation of nurses and the various milk establishments.

Pinocchio in Africa, translated from Cherubini by A. Patri. Boston, Ginn & Co., 1911. 152 p. (Gulliver's Travels Hero Stories.)

Pinocchio is a wooden marionette trying to become a real boy. His adventures, including his transformation into a donkey, give the author an opportunity to teach many wholesome moral lessons. He has become a great favorite with Italian children and his various adventures are chronicled in many ways.

Barbarian and noble, mediæval builders of the modern world, by MARION FLORENCE LANSING. Boston, Ginn & Co., 1911. 183 p.

This little book contains the story of Drusus, the coming of the Welsh people, Attila the scourge of God, Theodoric, Goth against Goth, Clovis, Saracens, Charlemagne, the school and the palace, the Vikings, Danes, Rollo, St. Winfred, and Richard the Conquerer.

Our country and its people; an introductory geographic reader for the fourth school year. By WILL S. MONROE and ANNA BUCKBEE. N. Y., Harper & Bros., 1911. 130 p.

The authors in the successive chapters tell us how to teach the New England uplands, the Allegheny plateau, the coastal plains, the central lowlands, the great lakes, western plains, Rocky Mountain highlands, California valley. These topics are worked out with a great deal of care and make it an important contribution to the pedagogy of geography.

The teaching of geometry, by DAVID EUGENE SMITH. Boston, Ginn & Co., 1911. 339 p.

Elementary geometry has not only a well defined place but a pretty settled mode of treatment in this country. On the other hand there are now those who would change its place and matter radically. The writer believes that a large portion of the teaching body is now disposed to progress and it is these he chiefly addresses. He would vitalize geometry in every legitimate way. This he does by introducing a good deal of concrete material to show its various applications.

Kinderpsychologie und experimentelle Pädagogik, von EDUARD CLAPARÈDE. Nach der IV. französischen Auflage übersetzt von Frank Hoffmann. Leipzig, Johann Ambrosius Barth, 1911. 347 p.

Annual report of the Board of Regents of the Smithsonian Institution, showing operations, expenditures and conditions of the institution for the year ending June 30, 1909. Washington, Government Printing Office, 1910. 751 p.

Untersuchungen über Geschlechts-Alters-und Begabungs- Unterschiede bei Schülern, von JONAS COHN und JULIUS DIEFFENBACHER. Leipzig, Johann Ambrosius Barth, 1911. 213 p. 3 Tafelin.

Beihefte zur Zeits, f. angewandte Psychologie und psychologische Sammelforschung, hrsg. von Wilhelm Stern und Otto Lipmann.

The continents and their people (North America). A supplemental geography by JAMES FRANKLIN CHAMBERLAIN and ARTHUR HENRY CHAMBERLAIN. New York, The Macmillan Co., 1911. 299 p.

Charles Fourier, par ALBERT LAFONTAINE. Paris, Bloud & Cie, 1911. 61 p. (Philosophes et Penseurs.)

Diary of Cotton Mather 1681-1708. Boston, Published by the Society, 1911. 640 p. Mass. Historical Society Collections, 7th Series, Vol. 6.

Woman and the republic: a survey of the woman-suffrage movement and a discussion of the claims and arguments of its foremost advocates. By HELEN KENDRICK JOHNSON. A new and enlarged edition with an index. Published by The National League for the Civic Education of Women, New York, 1909. 359 p.

American Red Cross abridged text-book on first aid. General edition. Manual of instruction by MAJOR CHARLES LYNCH. Prepared and endorsed by the American Red Cross. With 55 illustrations. Philadelphia, P. Blakiston's Sons & Co., 1910. 183 p.

Boy Scouts of America. The official handbook for boys. Approved copy. Published by the Boy Scouts of America, New York, Doubleday, Page & Co., 1911. 320 p.

The Journal of Experimental Pedagogy and Training College Record, Edited by J. A. Green. Vol. 1, No. 1, March 1911. London, Longmans, Green and Co. 92 p.

The unfolding of personality as the chief aim of education, by THISTLETON MARK. Chicago, The University of Chicago Press, n. d. 224 p.

Report of the progress and condition of the U. S. National Museum for the year ending June 30, 1910. Washington, Government Printing Office, 1911. 146 p.

THE
PEDAGOGICAL SEMINARY
Founded and Edited by G. STANLEY HALL

VOL. XVIII DECEMBER, 1911 NO. 4

THE PEDAGOGY OF COLLEGE ETHICS

By EDMUND S. CONKLIN

I ETHICS AND THE COLLEGE YOUTH

The fire of moral reform which swept through the country leaving in its path the scare heads of the muck-raker, the renovated departments of government, and the investigated public servant and interstate corporations, has been followed and supplemented by the wave of reform and investigation for business efficiency and efficiency standards. The one is the complement of the other, if they are not identical in function. Moral enthusiasm bent on the suppression of vice in all forms of life increases efficiency; and conversely, the increase of efficiency eliminates immorality. Hence the enthusiast for either morals or efficiency cordially welcomes the work of the other. The wave of moral reform has struck the school, demanding appreciation of responsibility for the moral integrity of the coming generation. And the school is trying to respond. Opinions and experiments galore are reported; France is claiming to be well on the road to the solution of the problem of secular moral education; and the eyes of moral educators are turned with expectation and interest to the efforts of Japan. President Hall, after an extensive review of the literature on moral education in the public school, states that there is no agreement and thus far no accepted solution of the problem (34. Vol. 1. Chap. 5). The value of the various schemes has yet to be ascertained.

Much of the force of this storm of criticism has fallen upon the college course in ethics. Where it has not been struck directly, it has been severely jarred, for it is inevitable that immoral conditions of college life and moral inefficiency of the college product should reflect upon the course in ethics. Perhaps the criticism may not be wholly justifiable, because many never take this course, and because there are so many other factors to build up or break down the moral life of the college student. Yet it has forced the teacher of ethics to many a heart searching with the result that many reforms have been attempted; and it is sure to cause a careful consideration of the proper content and the function of the ethics course. At present we have no scientific pedagogy of college ethics; only a vast collection of old line texts, a few attempts at an improved text, a considerable literature of criticism; and a smaller literature reporting methods tried and suggestions for improvement based on an intimate knowledge of the needs and capacities of the college adolescent. The teaching of ethics and the cultivation of the moral life may never be reduced to an exact science, nor even as approximately exact as the teaching of other subjects, for the large part of morality is below the threshold of consciousness and many other factors than the class room affect it; but the fact that greater efficiency has been attained in some cases indicates that the methods of the many may be improved and that a thorough understanding of the needs and capacities of the adolescent plus a knowledge and control of the moral influences of college life will produce a course in ethics the content of which and the teaching of which will be a tremendously effective part of the moral development of the student.

The complexity and the seriousness of the problem must be appreciated. The teacher who knows his problem sees perfectly well that restrictions of college life cannot and must not be so close as those of the home and preparatory school. Dean Briggs of Harvard calls attention to the protest on the part of the preparatory school teacher that students who under him have been exemplary in conduct for several years break down in a few months after entering college, and replies that something must be wrong with the preparatory methods if the student cannot stand up under the new conditions more than a few months. The blame falls not entirely on the college. Freedom of life in college is necessary as a preparation for the greater freedom of life after college. The adolescent must gradually learn to depend on himself and whether in college or not the process is at best a dangerous one. A side light is thus thrown on the importance of some degree of self-government in preparatory school days. In a sense the college does stand *in loco parentis*, but even in the best ordered home the parental control begins to relax in these years. When a boy enters college he begins a new mode of life which immediately makes a deep impression upon him. The emotional change and excitation is tremendous and for a time more important than what he learns of an intellectual nature. There is the thrill of realization of the desires of years or months of anticipation. At last he is a "college man." It is incumbent upon him to adopt the ways of a "man." And here is danger. There is to be change, there must be change, but in what direction shall the change be, and can the course in ethics direct it? In part the ethics taught can direct the change, but apart from some talks on hygiene in Freshman year the ethics rarely comes before Junior or Senior year. Much of the moral education must and will come from the contact with others, and from that vague but real thing termed "college spirit." The nature of that spirit is all important and it may be directed somewhat by the teaching of ethics. As this course directly touches the upper classmen and the college spirit is largely determined by them, it may thus influence the environment and the influences at work upon the younger students. The emotion aroused by the new experiences and opportunities of college life are bound to find expression in changed ideals and changed conduct. New moral problems arise because of the new opportunities and new freedom of conduct. With the large number, the moral attitudes and reactions have been a gradual growth under home and other healthful influence. The moral character is very largely unconscious, or unreasoned. Habits of judgment and conduct have been formed because such was the way of associates in home and school life. Now all this is seen from a new point of view. Real moral questions arise, conscience is effective, and new standards are to be reasoned out, rightly or wrongly. The youth feels that he should accommodate himself to the ways of the upper classmen who surely know what is right and in contrast with their learning and experience with life the old ways of the home folks are likely to look prudish and picayune. He has not, far too often, learned to discriminate between the good and the bad among his college elders; but even though he does attempt to discriminate and even though he does discriminate rightly, there is nevertheless a new and real experience with temptations and perhaps real wrong which he has never had before. Morality can no longer be an unconscious affair. He has thought upon these things; he has been tempted; he has met men who live according to different moral standards than his own; and it has forced morality to become a matter well within the field of consciousness. The nature of these college temptations and the way they influence the student thought must be taken into consideration in the making of a course in ethics. How bad they are is a matter of much difference of opinion; probably much of the disagreement due to the conditions prevailing in different sections of the country. A few years ago a Connecticut woman caused a furore of discussion by publishing the statement that she "would rather send her son to hell than to Yale College." If Mr. Birdseye's description of student life were to be literally accepted, she would not have been far wrong. His awful description of the extent of sexual immorality, venereal disease, drunkenness, etc., assented to as he says by many college authorities, is harrowing in the extreme; and if true in its entirety, demands immediate and drastic measures (5 Chap. 12). In spite of his sweeping statements, the basis for which he does not fully give, there is considerable evidence which points to a rather better condition than he generalizes. The vast extent of Christian Association work, Bible study movements, student volunteer missionary movements and interest, social reform work, and the like indicate that college life is not quite the hell which he depicts. And the study of conditions made by the association of Ohio colleges (57), provoked by Mr. Birdseye's statements, indicates that conditions in those colleges are not so bad as his general estimate, but are decidedly better. Every college man and every one who has had much to do with college students knows that such temptations exist and that some fall before them. Brockman's collection of confidential statements from college and theological students indicates clearly the strength of these in the lives of many youths. His list of severest temptations is not long (10). Dishonesty, profanity, etc., figure largely, but sexual temptations number more cases than any other three put together. The long list of statements which he prints shows the awful extent of the sex problem and the morbid state of mind often aroused by it. The curse of dirty athletics, now fortunately much less severe, bad fraternity spirit, college politics, drunkenness, cheating, lack of honor in business relations, and a long list of other sins might be mentioned as existent and demanding consideration. They do exist and perhaps always will more or less, as college is but a miniature world in itself and what the world has it has; but as the aim in life is to stamp out disease and vice so should the aim in college be; for although the aim may never be attained, moral character is made by the effort.

Those who study deeper see something of the mental process which the student passes through in the adjustment of his moral standards to the larger relations of life. He is not mature, the adolescent process is not complete, the moral instinct has not yet reached its fullest adjustment. There is a lack of appreciation of moral proportion. Dean Briggs has treated this in a little book with sympathetic understanding. (9). Paraphrasing from his text, as a school of character college must be a school of integrity, yet there are certain kinds of dishonesty readily condoned among college students. Undergraduate standards of honor for college officers are sensitively high and there is often a high standard of honor manifested in the conduct of athletic training, in the selection of men for class presidencies, athletic captaincies and as leaders in general; yet there is an inconsistent want of honor manifested in athletic contests, in written work, in excuses for neglect of study, in relation to non-students, etc. This want of proportion is peculiarly evident when it is considered an unpardonable disgrace to break training, yet not disgraceful to squander the hard earned funds sent by parents. The student needs to learn that a lie is a lie and a theft a theft wherever it is committed. Dean Briggs, as do others, considers this a part of the development process. This lack of the undergraduate is due to lack of experience which time will correct. The setting of high standards for others in some cases will in time bring him to see the necessity of them for himself. And the few psychological studies which have been made of the college adolescent indicate this progressive adjustment of moral standards. Dr. Tanner's study of the college woman's code of honor (83) assuming common honesty finds that "the college girl appears to be a person with a thoroughgoing contempt for sneaking and out and out lying but with sufficient intelligence and sense of humor in most cases to enjoy any sort of contest with wits even though she risks her scholarly reputation thereby" (p. 115). And again, "Even in the cases where she is below the average in her standards, the frank, almost naive admissions and the reasons given for the views, seem to indicate that these girls, at least, are more undeveloped than bad." (p. 116). The fact that the full appreciation of self-control and its moral contingencies is not yet attained is indicated by the returns summarized by Dr. Tanner thus: "The thing that is least condemned is deception for the sake of some one else, while the thing that is hardest for a girl to do is to undertake the reporting of a wrong doer" (p. 117). Earl Barnes obtained returns from both men and women in a university on a problem of honor. He found that if the penalty seemed extreme there was a tendency to shield wrong doers, and that the feeling of social obligation thus involved seemed to be a little more developed in the men than in the women. A significant statement in his study is that 18% of the men and 17% of the women knew "the right but frankly say they lack the moral courage to do it" (3 p. 486). It is his conclusion that the "sense of the larger social self is only partially developed" (p. 487). Sharp's studies (75) might be used to indicate a similar fact although such was not his purpose. This progressive adjustment and enlargement of standards is manifest also in the changes of attitude which take place toward religion in college years as Starbuck, Coe and Hall have shown. Dr. Burnham, too, has called attention to the philosophical tendency and propensity of the later adolescent (12), which is now generally recognized in adolescent literature. All these show that the college years are a period of adjustment and it is in large part a conscious adjustment. The youth is trying to get a rationally integrated concept of life, affairs, morals, religion, etc. Bizarre notions and principles are sometimes worked out and adopted, immorality is thus sometimes justified, but each is only a stage in development and not a finality. The youth is in process and it is the privilege of the moral teacher to take the youth at the very time when he is formulating his ideas of right and wrong and to guide those formulations.

It is to be remembered, too, that there is a change in progress from external to internal authority. Hitherto external authorities have been submitted to, especially in morals and religion; but now there is with approaching maturity the progressive change to an internal authority. The unconscious moral standards gained largely by imitation and the reliance upon some external authority for moral control are breaking down, especially the latter, and something must be put in their place. What to put in their place will be the substance of most of this paper but in a word it is the feeling of honor, self-respect, personal superiority to anything beneath the most virile of moral standards, and moral vision. This is the religious attitude. The union of self-respect, honor, which is the essence of individual morality, and moral vision which sees the cosmological significance of life, is religion. It is the union of the ethical and the cosmological. Together they produce sympathy and all its higher derivatives which are the flower of modern morals, and they touch the old fundamental, basal feeling of religion which has motivated so much of life. Where religious teaching is for one reason or another prohibited, there is no reason why the religious feeling may not be appealed to indirectly in presenting the cosmological aspects of ethics. The more directly it can be used, however, the better, for it reinforces and deepens the impression.

With the world calling for moral power and efficiency, and with the adolescent of college years in the nascent period of moral adjustment, how insufficient, foreign, barbarian do the arid ethical logomachies of most text books appear? When moral problems are rife with the student we have been leading him through discussions of Hedonism, Intuitionism, Idealism, Egoism, Altruism, Utilitarianism, Determinism, Indeterminism, a little of Kant, some of Hegel, enough to confuse the student, various references to Plato, Aristotle, Bentham, the Mills, Sidgwick, Martineau, and perhaps a dash of Spencer or Darwin, if they were not too heretical. To be sure, many of the text books have some things to say about the development of personality and the value of habit in the formation of character, but in point of time and space they are far outstripped by the speculative problems. One can easily believe the truth of the oft-quoted story of the college boy who upon being dismissed from college said he didn't care, he got 90 in ethics just the same. There is a growing feeling, as a few of the new text books indicate, to relegate these historic discussions to an advanced, elective course and to make the first course in ethics meet so far as is possible the needs of the student. To do this there must be a considerable treatment of personal hygiene, eugenics, all the factors in vital efficiency, social ethics, moral reforms, etc. These are indispensable topics, yet the old historic problems which have formed a large part of the ethics teaching of the past need and deserve careful scrutiny before they are bodily ejected. Those who are clamoring for the rejection of the old and seemingly worn out discussions and systems are not without much right on their side, for there is a manifest danger in dwelling upon them with students of the present. The particular turn which each took at any particular time in the history of thought was the product of the exigencies of that time and of the temperament of the thinker. To lead a student through these old discussions is a waste of good energy which might be utilized in the consideration of living problems, or the consideration of modern phases of the same problems; and if perchance the student becomes interested in these ancient quibbles, the interest is calculated to detract from the real problems of present life and when he gets out in the world he will find that the ethics within the college walls was a vastly different thing from the ethics of commercial and professional life. And the critics are doubtless right when they say further that the ratiocinative treatment of ethics develops an undesirable attitude toward the subject. It divorces ethics from life and places it in some transmundane sphere where it is treated as material for speculation. It is directly opposed to the long established pedagogical principle of procedure from the concrete to the abstract. But a further criticism may be raised to the effect that in the time allotted to the average course in ethics no adequate presentation of the men, the problems, and the systems produced is possible. Look, however, at the topics stressed in recent texts and consider if they are sufficient; personal hygiene, manners and etiquette, liberties, trespass, justice, selfishness, service, welfare, charity, duties to the family, the community, and the State. These are valuable, important and necessary; and they possess the additional charm, necessary today, of being pragmatic. But it is the successful-life Pragmatism of Protagoras; not the Pragmatism of James which sees a real value in the belief in free-will, the belief in a moral universe, etc., any of those great concepts which have so long helped mankind to interpret experience and to progress. These problems contain a germ of truth, are fundamentally human, else they would not have been so warmly discussed and have lasted through so many ages. And furthermore, they arise at some time in the life of every individual. No college student can take a course in psychology without facing the freedom of the will problem, no college student can take a course in biology, if it is at all dynamic, without being stimulated to think a little concerning the nature of the world in which he lives, and none can view life with the spirit of independence in the broadening and emancipating environment of academic life without these broader, deeper, more vital, ancient moral problems coming more or less clearly to his attention. In teaching physiology today we do not force a student to work through to full comprehension the Vesalian and Cartesian theories of the movement of animal spirits in the nervous system, but we do teach him the present solution of the same problems which Vesalius and Descartes struggled with. Likewise it may not be wise to force a student of ethics through the systems of Plato, Augustine, Spinoza, Butler, Paley, Hume, Kant, Hegel, Sidgwick, Spencer and the Mills, but it does seem wise to give him the modern attitude toward these problems or at least a working basis for the solution of them as they arise in his own life, one which shall be in harmony with the spirit of dynamic practical ethics expressed by the advocates of radical reform in the ethics teaching. Put to the pragmatic test one finds that with the vast majority it does make a momentous difference whether or not an individual believes that he lives in a moral universe. The history of human experience shows that the profoundly religious attitude is a moral dynamic of superior potency. Here the depths of the soul are touched, and here, if the geneticist is right, the whole experience of the race reverberates. The importance of emotion in the formation of moral judgments and moral standards has been demonstrated by psychology and the course of ethics which does not reverently use this factor is missing the most powerful dynamic in the building of character and in the inspiration to moral activity which the race possesses. The familiar terms Hedonism, Intuitionism, Idealism, Egoism, Altruism, Utilitarianism, Determinism and Indeterminism, stand for bewildering mazes of controversy but they conceal very real problems. They are the scars left by the struggle to reach the present more perfect concepts, but the product of the struggle is none the less important, the more so rather because of the fight to attain. The youth has these same problems to face and without guidance he may land on any one as an adequate aim and principle of life. The principle of health, happiness, pleasure, vitality, involved in Hedonism and Utilitarianism, is an essential part of modern ethics, but as an end in itself it is not adequate; the principle of immediate judgment of right and wrong, the seeming to know intuitively involved in Intuitionism, contains much of truth, but as a court of final appeal in moral problems it is utterly insufficient; the principles of loyalty to the self, loyalty to the family, loyalty to the community, loyalty to the nation, loyalty to the race, involved in Egoism and Altruism, are all essentials in modern life, but to stop at any one of them is to have made but part of the journey which the moral thinkers of the race have made; and the principles of supine helplessness in the face of circumstances or of internal power to overcome any obstacle, involved in the wearisome discussions of determinism and indeterminism, present a fundamental problem, a working solution of which is indispensable in an epoch of moral evolution. These may seem transcendent and other-worldly to the advocate of crass practicalities merely; but they are the principles under which the more practical and concrete problems are subsumed, and to which the student will more or less consciously soar, and they meet the pragmatic test of value. It is the prerogative of youth to dream and to seek the solution of universal problems; hence it is the privilege of the teacher of ethics to guide him to a solution which shall bring him back with unabated but increased zest and enthusiasm to the immediate problems of conduct.

II Influence of Scientific Study on Moral Thought

Fatalistic determinism presents a grave danger to the college youth in the moralizing process. It is a pit-fall, a blind alley, into which he is almost sure to slip if there is not some well designed instruction to prevent. However great the familiarity with the scientific attitude may have been before college days, and it is rarely very great, the force of its significance is now doubled and trebled by the very natural application to personal problems. In the readjustment process the youth is aware of various appetites, desires, and passions which persist in their demand for satisfaction. He is confronted with the scientific attitude which seems to him decidedly mechanistic, explaining everything by an indefinitely extensive chain of antecedent causes. There seems no place for will, for individual initiative. It is the almost inevitable result that the youth finding his appetites, desires, and passions so powerful and persistent should interpret them as his own peculiar endowment beyond his power of control. Such an interpretation is of course indescribably dangerous and not that of the broader-minded scientist; but it is the one which the student tyro in science is most likely to make. Physics and chemistry have left on his mind a decidedly mechanistic impression. Psychology, too, if he has had it, leaves a similar impression, perhaps even more dangerous because it is interpreting the phenomena of mind causally even to an explanation of the will as an instinct foreseeing its end. And on top of that, biology interprets life in terms of a causal series.

The study of living organisms and their transformations, following them out in their evolutional series down to and including man, is fascinating because it is so closely related to the most fundamental problems of the personal life. Here the student touches the perhaps hitherto tabooed theory of evolution and sees it handled without gloves. It sends a thrill of excitement through his whole being, which is easier to feel than to explain. He feels himself no longer a tyro; he has grasped for himself the great fundamental problem of life and he will no longer be subject to the absurd dictates of religion, the hushing attitude of pious parents and former teachers. Smug with the conceit of his own vast learning he proceeds to explain life and himself in causal and mechanistic terms. Pres. Hyde has cleverly presented the way in which the youth thus educated thinks it far better to accept the opinions of Tyndall, Huxley, and Spencer, who have studied the very fundamentals of life at first hand, than to accept the dogmatizing of the priest and theologian (44). He is right up against the same problem which has troubled so many of the great minds of modern science, but without the maturity of character and ability to withstand the reactionary effect upon his morals and to think the problem through.

To the youth in this state of mind the scientific position of "suspended judgment" is a drowning man's straw. It is valueless because the youth is intolerant of all that does not explain. He cannot be tolerant. There is the old urge of life manifesting itself within him which will not stop before such a figment of maturity. One could as well stop Niagara with a pebble. A solution of some sort will be made and if fatalistic mechanism seems to be the right one it will be adopted. And what solution the youth adopts may mean all the difference between moral death and moral immortality. Ethics must handle this question, but few text books treat it adequately or conspicuously. The free will problem appears; but rarely is it presented in language which relates it immediately to life. Ethics has been too fond of turning to metaphysics for its explanations. The adolescent likes to dream and speculate and philosophize, it is true, and it is well that he should; but an explanation of this problem which is more or less shadowed by metaphysical clouds does not help much in the actual process of living. Metaphysical freedom does not help the youth to be honest or to overcome the desire to drink with his fellows nor to master his passions, although he may enjoy the theory as a bit of mental gymnastics. He must be shown concretely that the environment has a powerful influence upon the physical and mental development, that inner effort can overcome and change heredity, that there is a psycho-biological explanation of the free will problem which works, and which is not contrary to a scientific explanation of the phenomena of nature. The Weismannian continuity of the germ plasm theory must be presented with emphasis, because it shows how great a factor environment and response to environment is in individual development. He must be shown, too, the power of nurture over nature; not in theory only but in actual cases. He must, of course, be allowed to see the facts and force of heredity so far as it goes; but as his own inner nature and problems at that period of life dispose to a preperception for mechanistic explanations the emphasis needs to be thrown on to the other side of the problem. Those marvelous reforms after adult life has been attained which Begbie reports (4) are worth calling attention to. And Dugdale's famous study of the Jukes, though often quoted as a wonderful illustration of heredity, which, indeed, it is, is an excellent and impressive illustration of the power of nurture over nature. Some of that family, in spite of the direful Juke heredity, were by virtue of different environment and different interests developed into moral law-abiding citizens (21).

Approached from this biological standpoint and with the attitude of the genetic psychologist a working solution of the student's free will problem may be reached which is not in opposition to his scientific interests. Of all modern writers Jules Payot comes nearer than any other to such a genetic theory of freedom, but he unfortunately just misses that explanation which might be perfectly satisfactory to the youth struggling with the deterministic problem. All that Payot says concerning the development of liberty, the cultivation of character, the education of the will as he calls it, cannot be too highly commended. It has made of his book a work so valuable that it should be on the desk of every teacher of ethics, if not in the hands of every student. No one else has so feelingly and so adequately and so stimulatingly presented these all important facts in the cultivation of character and personal efficiency. But there is a confusion regarding the statement of his theory of the will which if left as it stands would not solve the student's problem. In the place of the unsatisfactory theories of history, Payot attempts a compromise by which freedom is gained by struggle and hard work. In his own abbreviated form his whole aim is to show how to transform "a weak vacillating desire into a lasting volition" (64 p. 29). It is upon this desire that he builds. He posits its existence in every one not mentally afflicted; he believes that every one has a desire for improvement, weak and faint though it be. By means of meditative reflection, the association of ideas and the arousal and nature of the emotional life may be altered to develop the desire and to assist it; the importance of action in the development of will is stressed; and the indispensable factor of hygiene is described at length as a basis for physical power behind the will. The attainment of the goal is only possible by a long and bitter struggle, and is not designed to appeal to the lazy man. It is a long and arduous undertaking but the rewards are worth the fight.

But this is not an answer to the freedom problem. It is substituting a very valuable presentation of pedagogical applications of the psychology of attention in the place of will. His aim for all in life is a trained attention which can remain fixed upon its work for long periods of time and thus assist the possessor to valuable productivity. The student puzzling over the mechanistic interpretation of the universe and himself, especially himself, would not find much help in this. He might be perfectly willing to admit all that Payot says about the cultivation of the desire by meditation, action, hygiene, etc., yet he might think to find in himself a lack of power for the self-application of such a regimen. Payot has made the inhibitory power of the strong will synonymous with freedom, whereas freedom is a feeling aroused by the choice process of consciousness and may occur as well in the strong-willed as in the weak-willed, according to Payot's description of the strong and the weak. It is desire plus this feeling of freedom to choose which makes possible the transformation from weakness to strength. The feeling of freedom makes all the difference between activity and passivity. The psychological key to the problem lies in this feeling of freedom. The fact of this state of consciousness, its universality, and its persistence, demand explanation. A functional examination of it reveals that it is important to both the individual and the race, and is of long, very long standing in the latter.

To get at the genetic point of view it is necessary to drop for the moment all other discussions and theories of freedom and will consciousness and to consider what gave rise to all this. Looked at thus we find a very general belief among all mankind that a man can do about as he pleases if he wants to. Much of the time he responds in an habitual, mechanical sort of way, but he, nevertheless, feels that at times he can alter his conduct and respond in a manner not suggested by circumstances. There is a seemingly innate capacity for accomplishment which gives to the healthy, vigorous adult the idea that he can do whatever he considers wise. Man has overcome all sorts of obstacles in the struggle to exist, he has fought and vanquished the beasts of the forest, he has overcome other men who have opposed his progress, he has risen above the exigencies of climatic conditions, and he has learned for the sake of future comfort not to yield wholly to present impulses and desires. When the question is asked, " Can you do as you wish?" the natural man answers, " Of course I can do as I wish, anything within reason." Thus there is the peculiarly human recognition of the possession of power whereby it is possible if wise to rise above the constraint of environment and habit, to act at times contrary to the usual reaction to given conditions. Any other attitude is the attitude of a mind " sicklied o'er with the pale cast of thought," and the product of like minds. It is this feeling of power, feeling of superiority to conditioning circumstances, the feeling of freedom for self-expression as

Baldwin calls it, which has preserved in man's mind in spite of the sophistication of theology, philosophy, and psychology, the idea that "our wills are ours," although we may be obliged to add as does the poet, "we know not how." This is the generic feeling underlying the much-abused term, freedom of the will and explains the oft-recognized persistence of the theory. Its great age is overpowering in its magnitude. Any effort to comprehend it would strain the imagination to the breaking point. It is as old as humanity and perhaps far older. Its history could be traced far back of civilization. The savage council of war sitting in deliberation, the barbarian choosing a temporary place of abode, the troglodyte preferring to wander northward with the retreating ice sheet, and the arboreal ancestor of man selecting a comfortable tree, would all figure in the history of the feeling of freedom. Perhaps its history goes farther back still even into the lives of the lower animals, perhaps it has as its antecedents every experience of selection, the choice of a mate, the choice of a good place for a nest, the choice of one food as preferable to another, and so on down to the very earliest experiences of life. Just where in the prehuman or the human scale the feeling of freedom to have done otherwise or to do as preferred begins, we may never know; but we can ascertain enough to be certain that it is very old, one of the oldest, perhaps, of human feelings. Its persistence today is not then to be wondered at. In spite of all the arguments to the contrary mankind still believes in his freedom.

From this feeling of power with the recognition of the desirability of an act, the giving of assent, and the occurrence of the act as an immediate consequent arises the idea of will. If one particular experience of will, one will attitude of consciousness, is isolated from all the rest of life and analyzed into sensations, images, and affections, we learn its anatomy; if all the will experiences and expressions of an individual or a race are examined for their relations, effect on themselves, on the individual, on the race, on the environment, if their general principles, their potency, their values under different conditions, etc., are determined, we learn its physiology; but if all the conscious accompaniments of action and reflection, in all species extinct and extant, from the most primitive living organism to a twentieth century man are carefully collected, correlated and arranged to show their evolutional sequence and value and their ontogenetic parallels, we learn its embryology. And this in brief is the whole of the necessary distinction between the structural, the functional, and the genetic psychology of will. The structural psychologist reduces will to an attitude "always made up of three elementary processes, sensation, image, and affection" (Titchener, 84, p. 520); the functional psychologist defines will as "an instinct which foresees its end" (Ebbinghaus, 22 p. 86); and the genetic psychologist describes will as an event that "plunges its roots into the profoundest depths of the individual and, beyond the individual, into the species, and into all species" (Ribot, 69, p. 114). From whichever point of view the psychologists examine will they report their findings in the sequential order in which the events studied uniformly take place; and this order is customarily termed causal. In the genetic study of conscious experience, the psychologist sees a point where teleogical responses to situations take place. Increasing complexity in the functional activity of the organism in response to the increasing complexity of the conditions of life has brought about awareness. Further progress in the same direction leads to the memory awareness of the end before the action begins, to the awareness of the nature of the response required by particular stimuli as soon as the stimuli appear as sensations. Then follows the simultaneous awareness of several possible actions. There is the delayed response, called deliberation, during which the various possibilities rise and fall in conscious clearness until one receives the feeling of assent and the action follows. The choice stage in progress has been reached. In the choice process the various possible reactions are held up as imaginal presentations; they are compared in the light of all past experience and knowledge in any wise obtained, in psychological terms, there is an ascription of meaning. This may all pass off quickly and as like situations are presented frequently an habitual form of response may be acquired, but whenever some new factors complicate the situation, the choice process again occurs. This process, plus the emotion aroused by the recall of past experience, inhibits certain and permits other actions. There is no more the mechanical reaction to the stimuli present, but for it is substituted the delayed reaction in the process of which the reaction is governed quite as much, if not more, by the past experience of the individual as by the present situation. When primitive man, or those individuals of whatever species first had the experience, reflected on his choice and recognized that there were other possibilities present at the time, there came the I-could-have-done-otherwise feeling. And as he looked ahead at the new situation just arising with its several possibilities, he did so with the feeling that within him was the power of choice, that he was free to select that which he thought best. It is conceivable that disappointments and mistakes may have stimulated this feeling. The regretting of an action and the wishing to have done otherwise throws the fact of other possibilities strongly into relief. The first recognition of the fact of unconstrained choice must have been a tremendous impulse. The brute is subject to his environment; but man can change and conquer his environment because he has this power of deliberative choice, and the feeling of personal power which the recognition of its possession gives to stimulate its further use. The feeling of superiority, the feeling of power over conditions, the feeling of independence which the recognition of the value of the choice process gives, stimulated its further use and thus fixed its possession, it made it of selective value and insured its possessor of success in the struggle for existence. This great feeling, which is the feeling of freedom, motivates new conduct, new efforts, and thus makes possible new achievements in the progress of the race. It has released a new source of energy and stimulates its expression in new channels. What it has done in the race it can and does do for the individual. Sometime in the experience of every child or adolescent there comes the experience, attained gradually perhaps, of feeling that he is independent, or could be if he were allowed, that he is a self, an ego, that he can control his own conduct, that he is to be a free soul. With that feeling growth and the overcoming of difficulties are possible. If it never comes, the individual is deficient and ends in an asylum, unless some one by proper treatment can cultivate it in him. If it is crushed out or discounted by disease or sophistication, the individual is handicapped for life or until the feeling is again acquired. From the attainment of this point on the race or the individual makes rapid strides in advance, obstacles are overcome, problems are solved, habits are broken up to be replaced by new when new are needed, a vast new developmental power seems to have been attained. The events in the causal series of the history of man or the race which have this free consciousness as their antecedent are quickly recognized as being far more efficient and valuable; and it is the nature of man apparently to make more and more of it, to emphasize its value and thereby to bring about a greater and greater number of such responses.

Thus we find that freedom is a feeling included in the general treatment of the will consciousness and that it is a part of the causal series, at once both effect and cause. And we find further that it is a most indispensable factor in the human causal series because it is the cause which has motivated the great achievements. Without it the great advances might have been impossible and the individual who lacks it absolutely is a hopeless derelict. From the psychological point of view it would seem that the whole free will question must take on a different aspect, it must become pedagogical. Philosophical disquisitions no longer suffice. The feeling of freedom is a state of consciousness to be carefully cultivated.

The intensity of this feeling in any individual depends upon the perfection of the native endowment, on the vitality and on the individual experience. If the native endowment is defective or weak this all-important feeling of superiority to constraint is discounted, the personality is less well knit together, is lacking in potentiality, lacking in differentiation, is flat-faced, plastic, and consequently the responses to situations are simpler and more direct. There is a diminution of the choice processes of consciousness, at least in their effectiveness, and the individual is proportionately more constrained by every situation. The power of initiative is diminished. If there is a strong native endowment, a powerful developmental nisus, there is not only a strong feeling of personal power, as there is a feeling of weakness in the case above, but also the conduct of life will be more positive, there are more complex and indirect reactions, more and surer choice processes in consciousness. There is more initiative, more assertiveness and power to rise above immediate situations. This difference is commonly manifested in the daily contacts of life, but it is peculiarly demonstrated in cases of melancholy, where there is a feeling of helplessness and resignation. But a good heredity does not always insure health. If disease, unhealthy surroundings, bad habits of eating, sleeping, working, and thinking, the use of drugs and dissipation condition growth, the best of heredity can be wasted, and the same condition of lassitude, weakness and passivity be developed. If the activities of life are checked, a similar result may be produced. If the child or youth, or even the adult, is repressed constantly, frightened into submission, not allowed the freedom and practice of self-expression, then the feeling of personal power and capacity is stunted, undeveloped, rudimentary. Good heredity, hygienic culture and habits, and freedom for directed self-expression are equally necessary to the feeling of freedom and personal efficiency. The lack of any one may be overcome by the others, but all are to be desired and worked for. Depression due to lack of vitality or ill health of any kind is likely to injure the feeling, while the cold intellectual mechanistic conception of nature is dangerous because it retards and inhibits effort, crushing the will to choose.

If this discussion of free will is characterized by the smug complacency with which most articles on this subject conclude, implying that the final word has been spoken, the writer is apologetic. He is keenly aware of the fact that much more knowledge is necessary before the final answer may be scientifically given to the problem; but it seems established that the ethics taught in college must present the freedom of will as a vital evolutional and developmental factor. The aim must be for both teacher and student to develop the great fundamental underlying feeling, if there is to be moral progress. To this all that makes for healthy heredity and completeness of life applies, hence from this point of view eugenics, euthenics, and the crasser practicalities advocated take on value. All that develops the spirit of power and self-confidence is indispensable.

III PLACE OF HYGIENE IN ETHICS

Enough has already been said to make clear the ethical importance of health. But hygiene can and will produce more than the feeling of fitness and the ability to act freely. The very process of attaining a healthy, harmonious functioning of the organs of the body, not forgetting the brain, relieves the individual of some of the temptations mentioned by removing the provoking conditions. And hygiene belongs in the instruction in ethics, because the best of health is a part of the social demand for morality and a necessary condition of moral efficiency. That concept of moral health which includes only the attainment of personal morality in the narrower sense, which means only that the individual is free from the guilt of moral sins of commission, will not be tolerated in this day when moral progress is the slogan. The concept must include the capacity, interest and actual coöperation in the fight against immoral conditions. In an epoch of moral renascence, in a time when posterity is considered, when practical eugenics even is discussed, and when every effort is being turned by many to the moral improvement of conditions which need generations for complete reform, the individual must be fitted to coöperate in the moral progress, to facilitate evolution, not merely to be a greased cog in the machine, moving easily when others push; he must help in the push. This means abundant health and the efficiency now so much in demand. It means that hygiene must be taught and its practice stimulated for its moral value, and not alone as a science for academic interest.

The ethical significance of hygiene is not new. Some of the older ethics texts even include a little personal hygiene, as Janet, and Hopkins (47 and 42). But emphasis coördinate with the modern demand has rarely if ever been incorporated in the pages of a text book. Those who have written ethics texts have usually been philosophers who cared more for historical problems and metaphysical implications than for the moral health of coming generations. A change is evident, however, in some of the recent texts; but concreteness and the broader aspects of hygiene are still to be included. Years ago President Hall attempted it with results which warrant the use of these emphatic words: "I have begun a course of ethics with lower college classes and for two or three months have given nothing but hygiene; and I believe the pedagogic possibilities of this mode of introduction into this great domain are at present unsuspected and that, instead of the arid, speculative casuistic way, not only college but high school boys could be infected with real love of virtue and a deep aversion to every sin against the body" (34 Vol. I. Chap. 5). "Hence plain talks on sleep, toilet, food, dress, exercise, recreation, regularity, sex regimen and heredity, training, interest in periodic weighing and measuring, with a good deal of discussion about diet and nutrition,—these I believe should be the basis of the moral teaching of the young." If the demand of the times is to be answered much of this kind of thing must be included in the college ethics. The college scrap heap now being raked over by the efficiency expert is revealing a vast amount of human material ruined, and a vast amount of good human energy gone to waste through bad hygiene. The unhygienic life of many students is a familiar matter. Where there is so much waste, some of it must be through ignorance. But whether this be so or not, good teaching might inspire to a reform which would save some of that which is now lost. Modern efficiency studies, so far as work is concerned, are very largely applications of long established principles of hygiene. And modern hygiene is discovering new principles whereby the student and all who work or live may work and live at a higher maximum of efficiency. It is this which society is demanding, and it is this which the highest principle of ethical thought, loyalty to the race, demands. The world is now coming into a third great physical renascence. Two others have written in history, that of the Greeks and that led by Jahn in Germany. Roughly it may be said, with much truth, that the first made Greece and that the second made modern Germany. To what superman the modern physical renascence is leading only the history of the future can tell, but that such a movement exists only the blind could deny. The force and extent of it often fails of appreciation. The physical fads, the get-strong-quick schemes, the out-door sleeping porches, the interest in the fight against disease, the many societies and committees for health reform of all sorts, the millions of dollars invested in gymnasia, public baths and bathing places and playgrounds, and the thousands who make use of them, out-door magazines and health literature beyond enumeration, revival of folk-dancing, participation in sports, rapid increase of demand for physical trainers, not only in our own country, but even in China, India, and South America, societies for sex prophylaxis, eugenic movements, school hygiene literature and committees, efforts for national vitality, etc., etc.,—are but a few of the indices of the modern health crusade. And the whole has a vast moral significance. The college which does not read these as the signs of the times and adjust its course in ethics accordingly may not only find the moral and physical efficiency experts battering down its own doors but may also lose a magnificent opportunity to be of real vital influence in moral education.

To be sure many colleges already have courses in hygiene and where such is the case ethics is relieved of a part of what would otherwise be its burden. But the plea here is that the hygiene taught must be with a moral significance. If only the scientific facts are given in the hygiene course, then the ethics must build upon it, make the moral applications and inspire to practice in a way which the bare scientific teaching may not have attained. There need be no danger of wasteful repetition. The two courses, where they exist, may supplement each other and make each the more effective. From this point of attack ethics becomes frankly biological. Yet it leads to no crass materialism, but rather, as Sutherland has shown, to a most inspiring comprehension of the fullness and grandeur of morality. By leading back to the biological, it leads out to the cosmological aspect which arouses that great fundamental religious interest, aroused originally by reverence for nature. Fear of the bioligical trend reverberates the old theology which condemned the flesh. The modern esteems the body and gives it its rightful place; and thus a biological ethics comes into harmony with the modern Christian concept of life.

The simpler principles of cleanliness, toilet and the like are learned before the college years are reached, but the student rarely learns by home training or by social contact the art of using his body so as to produce the maximum of mental and physical work, and with it the euphoria which accompanies healthy functioning. Lack of this knowledge is one of the greatest sources of supply for the college scrap heap. The students broken by dissipation of one sort or another are largely the product of this ignorance. The boner who forgets to exercise and stays over his books until the early hours of morning is quite as likely to seriously injure himself as the happy loafer who while rarely troubling a book, keeps equally late hours and wastes his energy through dissipation. Perhaps both do so innocently; doubtless much of the physical misuse in college is innocent or even well meant. Some students overwork themselves with studential and social duties and obligations. They get their work and play and duty all mixed up. The value of alternate periods of work and rest needs to be presented and applied, or the application stimulated. The well-known law of Mosso and Maggiora that "work done by a muscle already fatigued acts on that muscle in a more harmful manner than a heavier task performed under normal conditions" (59 p. 150) should be shown and its mental correlate demonstrated. Prove to the grad-grind that he can do better work and more work by taking proper rest and exercise. The value, too, of spurts, of periods occasionally of extra exertion, need to be included, for by such spurts the organism is stimulated to grow and to make the structure necessary for harder work. Occasional forcing thus has its value as well as regular rest. The differences, too, between morning-workers and evening-workers have their application and importance. And so, also, does diet deserve much emphasis in the course. Where some students are starving themselves to make ends meet and others are filling themselves with indigestible foods and ruining their systems with liquors, there needs to be inspired an attitude of reverence for the digestive system upon which we depend for the preparation of the material from which we get the energy to live and to work. The results of careful experimentation with alcohol and other stimulants should be included that there may be no misunderstanding or hasty generalization concerning their value. The student who is inclined to use drugs for crams and special seasons needs to know that the new lease of energy is fictitious or misleading, that it has to be made up for later, and that the regular use of drugs reduces the power to do mental work. The morals of oxygen supply need dwelling on. The neurological aspects of oxygen supply, the work of Verworn and others, and the various tests of work done, may inspire to the better care for ventilation. Recreation needs hardly to be mentioned, one would at first think, when the cry is that the college youth does not do work enough; but the importance of regular exercise for all does need emphasis. Its moral value needs to be stressed and applied not only to college life but to the conditions of life into which many of the students are going. The explanation of fatigue and its effects should never be omitted. The unnecessary fatigue from overwork among the more able students, which sometimes occurs, has already been referred to. When this fact is added to the statement made by Irving Fisher that fifty per cent of the people in this country are suffering from over-fatigue, the importance of instruction concerning fatigue becomes evident. There is the danger of incomplete recovery, the increased susceptibility to infection when fatigued, the greater loss by working in a fatigued condition, etc., which the student should know and know well. If illustrated by the known physiological effect upon the nerve cells, the fact of fatigue becomes the more impressive. But the effect on character is the most essential. There is a relaxation, the bars are let down and the power of self-control is discounted. In the fight for character a bad case of fatigue may so relax control that the gain of weeks may be lost in minutes. And this makes the ethical treatment and consideration of fatigue imperative.

Without the broader aspects of the hygiene problems, such studies may tend to the cultivation of self-centeredness. As there is danger in constant moral introspection, so there is danger in constant consideration of one's own physical condition. The practice of hygiene must become habitual. But in order to make the impression deeper, without the danger of too great emphasis upon the individual and in order to orient the student for the eugenic aspect and the cultivation of personal interest in the larger moral problems, the national and racial aspects of hygiene should be included. As the morals of the individual depend in large part upon the physical condition; so must the morals of the nation, as a collection of individuals, depend largely upon the health of the nation. The moral and efficiency value of national vitality and the means and possibilities for its improvement can thus be linked to the individual studies and make the individual the more responsible. Metchnikoff's scheme for the prolongation of life and the elimination of old age is more than a dream, and his optimism is the spirit to be desired in our college youth. Prof. Fisher's report (26) on national vitality is a thesaurus of information and references for the teacher who wishes to include this material. The moral and economic loss to the country by the reduced vitality of the 2,000,000 syphilitics, the 500,000 tubercular patients, and the 3,000,000 cases of malaria each year (Fisher's statistics), besides the vast number of other preventable diseases and the slight but equally preventable ailments is too stupendous for comprehension. But it is the inspiring fact of their preventability which needs to come before the student. Because the tuberculosis death rate in England is now only one-third of what it was seventy years ago, because typhus fever has been practically stamped out, because the ravages of small pox, yellow fever, and typhoid have been checked, there is good reason for the motto of Pasteur: "It is within the power of man to rid himself of every parasitic disease." In this the developing social consciousness is appealed to, the biological aspect of being a part of the race and of assisting it in its problems is aroused. Sympathy and honor in their best and fullest sense are appealed to and it is these characteristics which are most to be desired. The cultivation of health, personal and social, is the immediate aim in this kind of instruction but the ultimate aim is the stimulation of these fundamental moral qualities. (In the appended bibliography are mentioned some of the most practical works on hygiene, those written from the personal, community, national, eugenic, and ethical standpoints. See numbers 1, 15, 16, 28, 50, 66, 71, 87, 89.)

IV Eugenics and Sex Instruction in Ethics

Modern Christianity, socialism, hygiene, efficiency and the growing social consciousness has directed popular as well as scientific attention to the improvement of physical conditions of life. The effort is to give all a chance to live and to live well. Resignation to wrong and suffering in this vale of tears as a preparation for eternity has changed to aspiration for the realization of heaven on earth. The progress of science and its wonderful conquest of the powers of nature plus the growing recognition of the meaning of evolution has brought the realization that present conditions may be improved indefinitely and that it is possible to cope with retarding forces and facilitate the progress of human evolution. It has forced a recognition of immortality as due not only to an undeveloped social consciousness but also to the physical and mental deficiencies of certain members of society. The attempt to do away with mental, moral, and physical deficiency has directed attention to its source with the result that the newer science of Eugenics has sprung up. The aim of this new science is to seek out and to control the sources and biological forces which make for or against the efficiency of life. It is not content with the expenditure of time and thought in the correction of criminals when they find that the criminality is due to hereditary mental deficiency. In the words of its founder, Francis Galton, "Eugenics is the science which deals with all influences that improve the inborn qualities of a race; also with those that develop them to the utmost advantage" (30). The ideal is to substitute for natural selection an artificial selection which shall breed a higher race of man, every member of which shall be physically, mentally, and morally fit. Although the scientific principles for this may be drawn from biology, sociology, and other sciences, the spirit of it is essentially moral. The actualization of the eugenist's aspirations depends upon the development of popular feeling. This can only be attained by wide and careful dissemination of the facts and in doing this the ethicist should feel himself under moral obligation.

Eugenics is new and to many repulsive, but the repulsiveness is due chiefly to misunderstanding. The facts which the enthusiast for practical ethics is obliged to face make an inclusion of eugenics imperative. Davenport states (17) that there are 300,000 insane and feeble-minded, 160,000 blind or deaf, 200,000 annually cared for by hospitals or Homes, 800,000 prisoners and thousands of criminals not in prison, 100,000 paupers in almshouses and out, constituting from 3 to 4 per cent of the entire population. When one realizes that a very large percentage of the blind and sick here reported are so because of venereal disease, one begins to realize the magnitude of the moral problem involved. Rentoul reports similarly staggering statistics for England (68) Davenport continues by estimating the cost to this country annually of all this deficiency: 30 millions for hospitals, 20 millions for insane asylums, 20 millions for almshouses, 13 millions for prisons, and 5 millions for the feeble-minded, deaf and blind (17). But the cost cannot be estimated in dollars and cents. Morally the financial cost is great because a large per cent of that money might have been invested for the furthering of various movements for moral improvement. It is greater still, however, because of the moral drag which all this deficiency exercises upon the race. The social worker knows perfectly well that many prostitutes are deficient, and therefore lead the life they do. But it is still further known that these deficient reproduce themselves and so keep up the stream of immorality both through heredity and through the effect of the environment into which they bring offspring. Statistics in proof of this criminal or deficient heredity are rolling up to an incontrovertible degree.

Davenport gives the case of an insane man who had two mentally weak wives by whom he had 13 children all mentally weak. With these cases of mental defectives, he presents charts showing the apparent hereditary nature of maniac-depressive insanity, the neurotic diathesis, Huntington's chorea, heart disease and other diseases. He shows at least that the marriage of those who possess such defects reduces in the offspring the resistance to such disease and increases the susceptibility to these diseases and defects, "There is," he says, "so far as I am aware, no case on record where two imbecile parents have produced a normal child" (17 p. 15). His appeal is that everything possible should be done to "dry up the springs that feed the torrent of defective and degenerate protoplasm." And Goddard's extensive studies confirm Davenport's statements. In a recent paper (31) he reports the studies of several family histories. One of these has 319 members of whom the facts are known and out of this number, 119 are feeble-minded and only 42 are known to be normal. The Volta bureau in Washington has reported the results of a study of over four thousand marriages of deaf and find that this defect, too, is hereditary (25). Yearsley in England recently reports a study of 284 cases of deaf-mutism of which "33.09% were undoubtedly the result of marriages either amongst those who had cases, direct or collateral, of congenital deaf-mutism in their families, or amongst those who were blood relations" (90 p. 310). Rentoul reporting from the English census returns says that "on one day alone we (the English people) had 65,700 married or widowed idiots, imbeciles, feeble-minded, and lunatics in the United Kingdom, many of them engaged and, by us, encouraged in the, to us, apparently pleasant function of begetting degenerate offspring, in fouling the stream of human life, and in adding to the sum-total of insanity" (68 p. 41). But the marriage of defectives of this sort is not the only group who are bringing defectives into being. Rentoul, Saleeby, Metchnikoff, Fisher and the rest all mention alcoholism, and venereal diseases as tributary. The predisposition to other diseases and the effect upon the offspring of alcoholism and venereal disease is well reported, but the actual extent of them no man knows. Fisher quotes Morrow as saying that the elimination of social diseases would probably make one-half of our institutions for defectives unnecessary, and adds that "in the opinion of very competent judges social disease constitutes the most powerful of all factors in the degeneration and depopulation of the world." (26 p. 36). Fisher reports also several studies concerning the effect of alcoholism one of which finds that over 80% of crime, 48% of pauperism and 35% of insanity are due to the use of alcohol. Luther Burbank condemns this crossing of bad species as "a crime against the state and every individual against the state. And if these physically degenerate are also morally degenerate, the crime becomes all the more appalling" (11 p. 59).

It is evident that if by some means the germ plasm becomes defective it remains so and that the offspring continues to be defective, a burden and a moral risk to the community. It is a man's moral obligation to care for and make the most of the unfortunates who are already brought into the world; but for the sake of efficiency, moral economy, and moral progress they should not be allowed to bring others into the world. Yet the eugenist goes further and advocates the arousal of a spirit which shall control the mating of youth. This seems at first, and to many, as an idle dream; but the fact remains that sentiment does control the nature of matings to the elimination of some. Sentiment has brought in the rule of monogamic marriage; sentiment prevents the marriage of brothers and sisters and to a considerable degree the marriage of cousins; and sentiment very largely prevents the marriage between different races. There is equal reason to think that sentiment may be developed which will prevent the marriage of the unfit. The eugenist would have the young consider the parentage and health before marriage. Their idea is to keep the "germ plasm on the upgrade." If this is to be realized, it must come through instruction.

The ethical significance and importance of eugenics has become patent, but the best methods for its presentation have not yet been determined. Some suggestions are, however, possible. The more biological phrases must be linked closely to the course in biology if not handled by it. Building on the Weismannian theory of the continuity of the germ plasm and on the spirit of Burbank's Training of the Human Plant, the significance of a defective germ plasm and the dangers of crossing with it or allowing it to breed can be made impressive. From the study of evolution the student can be led to see the vast advantage possible to the race of an intelligent selection substituted for the older natural method. Spencer's law of the decrease of birth rate with the progress of civilization, as contrasted with the Malthusian theory, (well presented by Saleeby 72), is an excellent basis for dwelling upon the importance of cultivation of the race by seeking quantity of quality. Few suggestions will be necessary to show to the average youth the application of all this.

It is almost sure to stimulate personal application because of the tendency of later adolescent thought in such matters. It means emphasis upon hygiene personal and social, to keep the self well and the germ plasm healthy. But it also means that youth shall think, as they anticipate marriage, of the health and antecedents of the one to whom they are attracted, and that pride in vigorous health for the good of the race shall be cultivated.

The problem of sex instruction is then immediately involved. The need of such instruction has already been pointed out in a previous section of this paper and the flood of literature upon the subject during the last few years has made the need generally recognized. This, too, is fundamentally and fearfully ethical. So many false ideas get abroad among students, that they are in danger of acquiring a false philosophy of sex. Knowledge alone can combat this. Of it Prof. Hodge says after years of teaching: "My experience with college men encourages me to believe that in connection with thoroughly sound eugenic instruction we can straighten them out for life on this point so that in the marriage relation they shall feel that they 'must be sure to observe the order of nature, and the ends of God' (Taylor)" (41). The eugenic aspect transfigures the sex problem and makes possible the treatment of it and the consideration of it with all the reverence of religion. It comes to the cosmological aspect of ethics; it touches the widest bounds of life and the most fundamental emotions. Relating sex thus to eugenics and religion makes possible the cultivation of that feeling of honor and self-respect which must be the new authority in conduct for the youth. When brought face to face with the facts of sex and sex hygiene as related to his own happiness and the welfare of the race, the student must inevitably have aroused within him a strong self-feeling which will force far more personal applications than the teacher will make. To each the problem is or should be sacred and its sanctity should not be too far invaded by instruction. Enough needs to be said to cover the general facts and to inspire personal interviews. The needs of each are likely to be so peculiar that the personal contact is far more to be sought. No general prescription is adequate. In all it must not be forgotten that the instruction is to be given for the sake of the student's future as well as for present needs. It is to be expected that the healthy among the students will one day be parents themselves. The responsibility of that position needs to be emphasized. Spencer in a classic passage has ironically shown the apparent consideration of the teaching of child culture as of far less significance. The same attitude is fortunately not true today, not to the same degree. But when the prophylaxis societies are bewailing the ignorance of parents, it behooves the college teacher to see that the next generation are not likewise ignorant. For the sake of the children they will bring into the world and educate, they need to know the anatomy, physiology, hygiene, and psychology of sex. And they need to know the best times and the best means of giving such information to their children. This point of view as well as the eugenic adds dignity to the subject. Much of this should have been learned previously in other courses; but if it has not, it needs to be given in ethics. In such event it may be wise to call in some one especially equipped for such instruction; and if the college is co-educational, to divide the class. But the needs are such that the teacher should be equipped with all necessary information on these subjects.

Voluminous as the literature upon the subject has become, its pedagogy remains still an unsolved problem. It is undoubtedly wise to put something into the student's hands which can be quietly and thoughtfully read over, but whether this something be a book or a pamphlet is still a question upon which there is no consensus of opinion. The writer is inclined to think that it is better not to place a detailed book in the student's hands. It holds the attention too long upon the one topic, and if it is purchased, it remains upon the table or book shelf where it will be taken up at intervals. The student who has had wise home and school instruction from time to time needs no such book. And the student whose education in these matters has been neglected is morbidly interested. For the latter, a book is too fascinating and exciting. Leaflets seem to be better. They are cheap, can be given away, and little time is spent in their perusal. They are read and then if not thrown away are easily covered up and lost. The attention given to them is brief; the instruction needed is obtained and the matter dropped. It must always be assumed, however, that the student will be called upon some day to give others instruction, and for this reason enough should be said about the work and publications of the best sex prophylaxis societies so that in case of need they can be resorted to. For the same reason the best books upon the subject need to be referred to and described. At present, in the writer's opinion, the best series of pamphlets is that issued by the Spokane Society of Social and Moral Hygiene, Spokane, Wash. Theirs is a graded series, and at present is the only such. The value of the grading is obvious. The Rhode Island Federation of Churches and the Massachusetts Committee on Sex Hygiene (Boston) publish three pamphlets each, which are excellent and very much alike. One of the series is for young men, one for young women, and one for the venereally diseased. The well known New York Society of Sanitary and Moral Prophylaxis now publishes six different pamphlets for students, parents and teachers. One of their recent publications, How My Uncle, the Doctor, Instructed Me in Matters of Sex, is a valuable addition to the English literature of sex instruction. It was written by Dr. Max Oker-Blom, a professor in Helsingfors, and has since been translated into ten different languages. It outlines for the student in an attractive manner, how through flowers, fishes, birds, and animals, the first sex instruction may be given to a child. There are now several good publications for this purpose. The two little books by Miss Lowry (51 and 52); one, Confidences, for girls, and one, Truths, for boys, are excellent; and the two by Smart, What a Father Should Tell His Son, and What a Mother Should Tell Her Daughter, are almost equally good (78 and 79). For the youth, or later adolescent, the supply is not so good. W. S. Hall's two books (36 and 37), From Youth into Manhood and Reproduction and Sexual Hygiene, are good for the young man, but there are none equally good for the young woman. Much of the literature produced for these purposes is too full of presentations of the horrors of venereal disease, of personal prejudice of some sort, or is characterized by a lack of knowledge of adolescence. The teacher of ethics must of course know all of these and many others. If he should desire a more thorough knowledge of the sex problem he can turn to Forel (28), Scott (73) and the medical literature. Northcote (62) presents similar material with a clearly expressed religious feeling. If suggestions for the teaching of sex through biology are wanted for the untrained parent or teacher they are to be found happily presented in Miss Morley's book, The Renewal of Life (58). There seems now to be a consensus of opinion among those who have examined carefully into the extent of and dangers from venereal disease that some instruction concerning these diseases should be given to all. This to be done not only as a warning against sowing wild oats but also, and much more, as a means of arousing caution in the face of the fearful possibilities of accidental innocent infection. And for the sake of moral reform and self-protection something too must be included about the facts of the white slave traffic. Much material on these two topics is to be found in the literature already mentioned and in the references they contain. Unfortunately much of the literature on venereal disease and the white slave traffic is more likely to create phobias than foresight, and this is the danger to be avoided in its presentation. An excellent book on these two topics is that by Lavinia Dock entitled Hygiene and Morality (20). In this the facts are adequately presented and yet in a manner as slightly repulsive as it is possible to handle such a topic.

The sex problems can be easily over emphasized. They need to be included; but too much detail should be avoided. The effective instruction is that which arouses feelings of self-confidence, self-respect, aspiration to the responsibilities of parenthood, and Christian sympathy.

V. Preparation for Moral Efficiency

In the preceding sections the aim has been for the ethics taught to develop feelings of moral and physical power, honor and self-respect; now, honor and self-respect must be even more sought for, and with them the moral enthusiasm which expresses itself through coöperation in moral progress. The aim must be to supply, in large part at least, that lack of a sense of proportion in honesty, truthfulness, justice and moral obligation characteristic of the college adolescent. By showing both the principles and practice of moral conduct and of moral reforms and by presenting the material in a concrete manner, the student may be fitted for life in the modern community. He will be so taught that after leaving college he will realize that his ethics was close to the problems of life and not so divorced as much of the ethics of the past has been.

When the social consciousness spreads out in later adolescence, when the developing sympathy reaches out beyond the family group and includes the nation and the race in its benignance, the individual is peculiarly interested in solving the great problems of society. By debates, the study of sociology, reading or by some means the youth becomes easily impressed by the immoralities of the social order which permits various injustices to exist. He sees things in the large, the very large, and overflows with big ideas and Utopian schemes. This enthusiasm loosens up the soil and makes the very best season for sowing the seeds of moral activity. One of these is the evolutionary attitude toward social problems. If the individual is not to relax later into a hopeless indifference toward immorality and injustice in the larger relations and functions of society, he must have well planted that view of life and society which sees it constantly evolving, constantly changing and as such susceptible to reform. Without the evolutionary view conditions would seem hopelessly fixed and the inspiration to moral activity killed. But with it there is inspiration to strive and to eliminate the evils recognized. It furthermore links up to the broad racial religious view cultivated by eugenics. Thus the present moral conditions of society appear no more hopeless than those of the individual. As culture may change the individual character, so progress may change in society what is not possible to wholly overcome in one generation. The evolutionary aspect gives a perspective which makes the presentation of modern social problems easier and more readily understood. Dewey and Tufts after a long experience recommend the presentation of the history of ethics, actual moral principles not ethical theory, as the best introduction because it orients the pupil and enables him to see the problems to be discussed in their social and evolutional setting (19, Intro.), and there comes often with the evolutionary view, as with the eugenic idea, a feeling of obligation. The individual realizes the significance of his relation to the whole, that what he is can help or hinder, and this feeling of obligation is fundamental to ethical activity.

In bringing the student into the evolutional attitude toward ethical problems stress must be placed upon the family. As an evolutionary and civilizing factor the family stands supreme. Not only must its permanence be insured by such instruction, but from such a viewpoint some of the dangers of evolutional ethics may be obviated. Without some point of orientation the student might well be lost in the sea of evolution, but if oriented by the family, its welfare and preservation, he should be able to steer clear of the dangers which some see in this form of teaching. As the deterioration of family life is one of the great moral problems of the present, it becomes increasingly important that its value to morals and civilization be so stressed. Both as a factor in the preparation for moral efficiency and in the solution of immediate moral problems, the family must be emphasized. Most of our college youth have come from good homes, and in many, if not most, there is deep down in their hearts a love for their parents. Like religion it is often too deep and sacred to be dragged out and discussed, but a tactful consideration of the family and of family ties can be used to rearouse a perhaps momentarily submerged love of mother or of father which will serve as an anchor in the turmoil of moral doubt and change. As a part in his preparation for moral efficiency, the youth needs to know something of the history of the family, how it has come to be, and the steadying force which it has exerted. The inspiring story of Sutherland (82) and the forceful words of Mrs. Bosanquet (7) should be brought to his attention. After such an orientation, the appalling statistics of divorce and the decline of home life can arouse appreciation of the importance of the efforts to maintain the home as a vital institution.

With the presentation of the ethical value of the family and the home is opportunity for the presentation of what is known about the moral training of children. The demand for this needs hardly to be mentioned. The literature is vast (see President Hall's chapter on moral education, 34), and while there is little consensus of opinion concerning the best methods to be employed in the school, there is a considerable body of knowledge produced by the students of child life and by teachers which can be readily applied to home training. All the studies show a world-wide demand for better moral training. Toward this the course in ethics can contribute by preparing the parents of the future. For simpler presentations and for practical use and recommendation Prof. Sisson's recent book on the essentials of character (77) and the books by Mrs. Cabot (13 and 14) are especially worthy of mention.

The preparation for a life of moral activity that is worth while is the preparation for moral efficiency. Part of this has been provided for in the sections on hygiene and eugenics, but only part. The field, conditions, and opportunities for such activity need also to be presented, and to be considered from the view point of efficiency. That in moral activity which is inefficient is by so much immoral. The moral man whose influence is discounted by certain shady practices in business is by so much immoral as well as inefficient. The philanthropy which is wasting trust funds by neglect of accounts and supervision is by so much immoral. The efficiency movement led by experts is turning its light upon all forms of life. The energy wasted by children in our schools in the study of subjects which are afterward of no use or value is being brought to light and the rapid growth of industrial education is the result of the appreciation of that waste. The industrial education has branched out and grown into vocational training. Colleges and universities prepare not only for the different professions but also for callings not hitherto dignified by the name of profession. Efficiency tests and standards are being worked out for the various departments of business, government, education, philanthropy, etc. Allen defines the scope of this movement thus: "Where standards of administration are unsatisfactory; where taxes are too high and buy too little; where schools waste taxpayers' money, pupils' time and democracy's opportunity; where results of religious work are disappointing; where hospitals regularly incur deficits; where crime is neither controlled nor understood; where civic and educational leaders make futile protests against political corruption; where good intention is permitted to cover a multitude of administrative sins; where charity injures those it aims to help;—efficiency tests will be found lacking." (2. Preface). And here they are to be supplied. Allen's work well represents the spirit and methods of the movement. He proposes to substitute an efficiency test for the goodness test. For him "the good man we talk about so much does not exist; or rather he exists in so many shapes and types that the composite can never be found" (2, p. 2). "There are at this very time good men so bigoted as to believe that all who oppose trusts, protective tariff, high license, are good while all who defend them are bad. Thus it happens that knowing a man to be good, upright, honorable, Christian, furnishes no basis whatever for determining whether he believes in free silver or gold only, whether he is Protestant, Catholic, or Jew, republican or democratic, socialist or reactionary, total abstainer or moderate drinker, a help or a hindrance to his fellowman. Still less does it of itself indicate his suitability for position of mayor, auditor, alderman, pastor, hospital trustee or school superintendent" (2, p. 3 and 4). And he proceeds to apply this rigidly to hospitals, schools, charitable work, prevention of crime, religious work, government, and the making of bequests, showing the methods for statistical reporting and treatment in order to present the actual efficiency of each. This may be in large part economics, but its ethical significance is likewise apparent. If the aim of the ethics course is to have its graduates participate in the affairs of life morally and in the active movements for moral reform efficiently, it must inculcate this spirit of moral efficiency by studying the wrongs, the maladministrations, the mistakes, the frauds, and the means of their alleviation. Its presentation of practical ethics must be from the efficiency view point. President Hadley has presented the problem from the evolutionary moral aspect by comparing the conduct of men of today in private and in public life. In private life, with their families, neighbors, and club associates, men are generally courteous, self-respecting, helpful, unselfish, generous in case of a great calamity, and commit a thousand acts of daily sacrifice the world never knows. But the same men in politics or in business will ruthlessly hurt a weak competitor for money or for office, will be selfish, will be snobbish and servile for the sake of advancement or power, will lie or cheat. And in answer to the question why concludes that "men have been trying to live in peace and harmony with those about them for so many thousand years, that we know what is needed to keep the peace. But there have been so few hundred years since we began experimenting with the present commercial and industrial system, that we do not yet know what virtues are needed for its maintenance" (32, p. 12). Every muck rake brings up a new argument for the need of moral efficiency and the preparation for those higher and racially newer fields of morality for which imagination is needed. The things which are immediate, which we can see and feel or readily imagine, are emphatically judged right or wrong, real moral emotion is aroused; but the things which come to us only indirectly, which are long circuited, the actual source or effect of which is hard to follow, which tax the imagination, are the things which are not so emphatically praised or condemned. We have not had, as President Hadley says, so long an experience with these forms of immorality and hence they do not arouse such intense emotion. Prof. Ross has happily said (70) that distance disinfects dividends. Unfortunately it does for the many because the distance makes the filth invisible. It is for these problems that the student needs careful and special preparation. He must have seen them in the concrete so many times as to be able to detect at once the wrong involved and to respond readily with the condemnatory judgment. All these immoralities and inefficiencies, these sins of commission and omission, must be worked over until a real and strong aversion is built up. The world into which the student is going is not made of such stuff as most ethics texts are made of, but it is a world where moral problems are hot. He is going into a world where discussions of the highest good, categorical imperatives, and Hedonistic calculus, are overshadowed by falsification of values, short weights, watered stock, bogus mines and medicines, gold bricks, counterfeit money, fake corporations, stock gambling, bucket shops, secret rebating, interference with legislation, evasion of laws and a host of other sins against society. His knowledge of actual morality must be such and the breadth of his social consciousness such that the immorality in all these will be recognized instantly. That character and insight is to be sought which can follow the path of the long circuited effect and responsibility to its end, and which will conduct all affairs municipal, commercial, professional, and philanthropic with the same maximum degree of efficiency. The character which is good because it is efficient both in work and moral conduct is superior even to Allen's efficient man. He would substitute efficiency for goodness only because our standards of goodness have not kept pace with our standards of efficiency. Such being true we need to clean up our standards of goodness and inculcate the best in our students. The best will be superior even to efficiency because, while including efficiency, it will add to it the moral instinct finding expression in both feelings and acts of sympathy and compassion.

A vast number of youths go to college without knowing or thinking much of what they will make their business in life. Many who go to college with a well-defined plan, change it entirely as a result of the new interest aroused and the broader vision gained. The problem of what to do in life becomes very acute in the later college years. Many who might far better go into other vocations turn to teaching because lesson-getting is the only world they know and they are afraid to attempt the unknown. Vocational bureaus have been established as a consequence of the realization of the fact that so many boys upon leaving the public schools take whatever job they can get; and many times worry through life as a square peg in a round hole. Meyer Bloomfield has recently described the need and methods of this work in an able and stimulating manner (6). But what of the college student? How many of them become square pegs in round holes? Various religious agencies are presenting life work talks to students, and faculty advisers doubtless do much to help the student with these problems. A few institutions have even had courses of lectures on the different professions. But from personal observation in a considerable number of colleges the writer knows that in those colleges a vast number of students know little or nothing of the actual nature of the different vocations. They need sound advice and instruction concerning the opportunities in the different possible fields of work concerning the ethical problems which people in those vocations have to face. Bloomfield says that courses of lectures have been given at Harvard, Boston University, Tufts College and elsewhere " dealing with the occupations and their requirements " (6, p. 65). Aside from the actual possibilities of success in the different callings, which is in itself a great moral problem, there is a peculiar ethical problem wrapped up in each. Take Bloomfield's list, teaching, architecture, journalism, law, commerce, philanthropy, industrial work, business, agriculture, forestry, medicine, special fields for women, art, music, drama, scientific pursuits, politics and public service, and consider them. Each subjects its members to different conditions in which the moral problems are different. The ethics of the medical profession are now being discussed seriously by its members; the ethics of the law is a problem of long standing; journalism is frequently attacked for its apparent lack of interest in morality in the face of its incomparable opportunity to mould public opinion into moral channels; some of the problems peculiar to business have already been mentioned; and it is evident that the man in the laboratory or the school room, faces ethical problems as different from those of the man in the studio, the pulpit, the factory, the forest, or the chair of office as their moral problems are different from each other. The student should be acquainted with the moral dangers peculiar to his chosen calling before he is blinded to them by the furious struggle to succeed. And when the youth is intensely interested in the problem of vocational choice, there is a nascent period for such instruction. It would make ethics real and appealing. It would give the youth a preperception for moral dangers which might save from calamity. For the sake of mere efficiency his choice of a vocation must be intelligently guided, and a knowledge of the moral problems given, but for the sake of moral progress he must be prepared to participate intelligently and effectively. Preparation for participation in the affairs of state may be included in this as every man must to a greater or less degree assist in government. The relation of every vocation to the welfare of the people at large is a part of the ethics of every vocation. This relation has in ethics more than any other of the so-called practical problems been stressed. It was one of the first to be introduced, as the next section shows, and it is almost invariably included in some manner or degree. But the facts of it need vitalization by an infusion of the concrete.

The vast number of social betterment and moral improvement societies and movements which have grown up rapidly in the last twenty years brings a new department into modern ethics. They not only indicate a recognition of responsibility for the improvement of moral conditions, for the facilitation of moral progress, but they also present a demand for intelligent coöperation and direction. Efficiency is the spirit of modern philanthropy. Efficiency tests and standards are being applied to church work, hospitals, settlements, and the like, with a view to making the time and money invested for moral betterment as effective as possible. The inefficiency of many such movements has been, and may still be in some cases, due to ignorance, indifference, and a feeling that such work should be dominated more by emotion than by sound judgment and knowledge of the best methods. As Allen and others have shown, trustees and directors have leniently allowed methods which would not be tolerated in business. Now that such vast sums are being invested in welfare work there is the demand for effective administration. And this demand is extensive because of the vast number of such organizations. It means that a large number of people must be able to direct these movements intelligently. Besides this it must be recognized that the college students are to be citizens and parents and as such should be prepared to use the publications and employees of these societies when there is need, and to know what sort of work is done in order that they can suggest and initiate when their community has some special need.

Work for the protection and reform of the morals of child life is an extensive department by itself. The juvenile courts, established now for more than ten years, demand expert thought and direction. The probation system which has grown up with them demands the coöperation of intelligent people of sound judgment and knowledge of child life and social conditions. Both young men and women graduates can if prepared be efficient in such service. College women have been especially effective as probation officers for wayward girls. In the first ten years of the Chicago court over thirty-one thousand children passed before the judge and of the boys put on probation 80% never again came before the court, but of the girls only 55% did not come up again. This is an index of the seriousness of the delinquent girl problem. The thrilling story of Lindsey's fight for the children of Denver should be familiar to every student of ethics (49). Some mention should be made of the work of societies for the prevention of corruption, as that of the New York Society for the Prevention of Vice, made famous by the life and work of Anthony Comstock; of the work of the National Child Labor Committee which is endeavoring to relieve the conditions made by the employment in this country of more than a million and three-quarters of children under fifteen years of age; of the scheme for a children's bureau of the Federal Government for the investigation of infant mortality, delinquency, degeneracy, employment, orphanage, and the like; of the work of Day Nurseries which provide for the children of the unfortunate; and something too of the laws for child protection concerning immoral shows, selling liquors to minors, admittance to pool rooms, distribution of obscene literature, immoral advertisements, for children's courts, and for parks and playgrounds. The efforts for the prevention of the wastage of child life through their eugenic aspects have much of ethical importance. And this, of course, includes the ignorant mother as well as the child. The work of the Kaiserin-Auguste-Victoria Haus in Charlottenburg could well be taken as a model. It has twenty-nine different departments of research, owns its own milk plant and stables, has laboratories for research, consulting physicians, a school for mothers, an out department, a training school for nurses, a kindergarten course, teaches cooking, washing, sewing, mending, making of children's clothes, the physiology and hygiene of the child, and the practical care of the child. A similar piece of work in Ghent has in a few years reduced the infant mortality from 33% to 4%. In this country the Caroline Rest in New York, some churches, settlements, and societies are doing much the same work although not on so large a scale. And in addition, the graduate going out into the world should know something of the work of social settlements, the methods of institutional churches, Christian Associations, boys' clubs, Boy Scouts, Big Brother and Big Sister Movements, substitutes for the saloon, the International Reform Bureau, and the various agencies with which he will come into contact as a citizen or have occasion to use in the moral improvement of his own community.

And this material should not be presented as so many bare facts. Morality based on a race-old feeling is not easily aroused by reason. But concrete illustrations of the conditions which the various organizations are attempting to fight arouse the moral instinct and make the impression lasting. The teacher should collect a store of such illustrations to be used as occasion offers. If the college is connected with a social settlement, or has access to boys' and girls' clubs, some first-hand knowledge can be obtained by actual participation in the work for moral betterment. Such doing is eminently more valuable than much telling. But there are many fields where doing is impossible and here imaginal situations must be used to arouse the feelings. The heroism of Comstock, the magnificent fight which Lindsey has made, the thrilling career of Jacob Riis, the less-known, but none the less inspiring work of Mrs. Josephine Butler in England, and the campaigns for moral reform led by Hughes, Roosevelt, LaFollette, Folk, Jerome, Heney and others offer a vast storehouse of material which may be drawn upon for moral inspiration. The ethics which does not inspire by great tales from the front of the fight is missing its opportunity. Ethics must burn with the realities of modern moral enthusiasm.

VI. The Ethics Text

President Hall has in an obscure publication reviewed the ethics texts, along with others, which were used from the founding of Harvard down to the early years of the nineteenth century. From this paper we learn that for a hundred years after the founding of Harvard logic came to dominate the interest of pedagogues. Disputations and the ability to participate in them creditably was ranked of superior importance, while ethical teaching sank into insignificance, "although the forte of the New Englander had always been character." "The works of John Robinson, collected by Ashton, are largely ethical, and treat of health, marriage, liberty, fashions, studies, etc. But after Roger Williams was banished in 1636 and the Cambridge Synod had condemned 82 opinions, the Puritan mind narrowed and darkened down, and morals consisted in Sabbath observance, Bible reading, baptisms and other theological duties" (33, p. 142). The beginnings of an effort to teach morals apart from theology are indicated some years before the Revolution in a text published by President Thomas Clap of Yale in 1765. This is entitled an Essay on the Nature and Foundation of Moral Virtue and Obligations: Being a Short Introduction to the Study of Ethics, for the Use of the Students of Yale College. This 66-page ethics premises that "as moral philosophy makes a considerable part of our academical education and is nearly connected with true religion, it is of great importance that it should be clearly stated and fixed upon the right foundations." Virtue, the text says, "is not by nature but a Divine gift." Yet he discusses several of the chief virtues on their merits, and defends stratagem in war as not lying. Another index of the beginning of a separation from theology is to be seen in the gift of £1,362 by John Alford to Harvard College in 1789 for the establishment of a chair of Natural Religion, Mental Philosophy, and Civil Polity. President Hall includes (33) a lengthy quotation from Alford's will which declares the duties of the chair to be, among others, demonstration of the moral attributes of the Diety, the doctrine of future rewards and punishments, obligations and duties of man to his Maker, "the most important duties of social life, resulting from the several relations which men mutually bear to each other; and likewise the several duties which respect ourselves, founded not only on our own interest but also on the will of God," to the coincidence of revelation and reason on these points, to read lectures on "application of laws of nature to nations and their relative rights and duties," also on civil government. His lectures on natural religion were to be read to all four of the academic classes, those on moral philosophy to the two senior classes, and those on polity to the seniors only.

Ethics was at first sternly opposed. The Calvanistic colonials believed that through religion and not through ethical instruction was moral conduct and character to be attained.

Cotton Mather is quoted as objecting to the employment of so much time on ethics, which he termed a " vile form of paganism." In continuing President Hall says that although taught from the first, not until after the revivalism of 1740 did it slowly advance to a place beside and then above logic. At first virtue was likeness to God and the religious sins of prayerlessness, unbelief, etc., were dwelt upon. There was little change from More's Enchiridion down into the 18th century to Paley whose Principles of Moral and Political Philosophy reached in 1821 its tenth American edition. About the only progress was a tediously controversial transition from the view that morality was a code of laws revealed in Scripture by God to the view that his code was best studied in the innate intuitions and sentiments. This change being due to the influence of Clarke, Shaftesbury, Cudworth, and Hutcheson. Strangely enough not until two decades before the Declaration of Independence, which owed so much to this movement, did the ethical texts begin again, " as they had rarely done since Aristotle, to expatiate upon political rights and duties that though few were inalienable" (33, p. 152). McBride's Principles of Morality was one of the first to have physiological references (published in 1796). President Hall concludes by saying that the Unitarian movement, the anti-slavery movement and other reforms left an indellible mark on college ethics.

Mark Hopkins incidentally remarks in his text-book that Paley's ethics were formerly taught almost universally in this country (42, p. 9). And although his own teaching at Williams is said to have been considered a radical innovation in the eyes of his predecessor, his ethics are well described as semi-theological. His teaching which culminates in his book, The Law of Love and Love as a Law, is a hybrid product of Christian ethics and the Common Sense school; and although published many years after Darwin really belongs to the pre-Darwinian school. Thus naturally he bases his theory on intellect, sensibility, and will, with the moral nature treated almost as a coördinate faculty. All these are but functions of the person, the ego, which has the power of choice. Choice is the object of moral judgment; and obligation is recognition of the right through reason. Less than a third of the book is given to theory, while the remainder is devoted to what the law of love would require us to do, to practical ethics. It is this which made Mark Hopkins' ethics famous, or possibly infamous in the eyes of his critics, and it shows the keen ability of the man to sense the real needs of his students. He presents in lucid terms the duties we owe to ourselves, the duty of perfecting the powers of the mind and the body and the spirit, care in the formation of habits, duties regarding the rights of others, regarding the wants of others, perfecting and directing the powers of others; also duties from special relations, as the family government, relation of the sexes, marriage, divorce, parents and children, society, etc. The last chapter concerns the duties to God, cultivation of the devotional spirit, prayer, use of the Sabbath, and like topics. Thus did his genius lead him to anticipate much that is now advocated in our modern social ethics. Two other texts which have had extensive use in this country, Hickok's and Janet's, are to be classed with Hopkins', because like it they are chiefly a presentation of classified duties. Hickok's appeared about the middle of the last century (39). For him the ultimate rule in morals is Right. This is ascertained by reason, man's distinctive quality. This ultimate rule of right is simple, immutable, and universal. Submission to this Right is the great duty which involves all other duties. Practically the entire book is devoted to a statement of duties and authorities. The duties are classified and worked out in elaborate detail, seemingly covering every possible question. The authorities presented are the civil government, divine government, and parental government. Janet's text is a cold, dead, cadaverically repulsive handbook of duties. The law of duty is in itself its own aim. "Do as thou shouldst do come what will" is its maxim. Duty being absolute is universal. The law of duty is obligatory in itself and also because derived from God. The whole is a detailed statement of duties of justice, concerning property of others, toward liberty and honor of others, equity, charity, and self-sacrifice, toward the state, professional duties, family duties, bodily duties, etc., etc., each being treated in numerous sub-headings. The absolute nature and assumption of finality in these is oppressive. The individual is seemingly placed under the law of reason, but the laws have already been completely worked out and formulated for all time. All there is left for the individual to do is to meekly submit, take one of these books as his Baedeker in life and attempt to guide himself through each experience according to its dicta.

The American market has been flooded with text-books in ethics. President Hall says in the article just described that "in neither logic, psychology, nor any branch of the great science of man, if in all combined, have there been so many text-books of American make as in ethics." The advances made in ethical thought, the rivalry between the different schools, uncertainty concerning the conclusions advanced, and the unsatisfactory results of its pedagogy are doubtless sufficient to account for the plethora of texts. But the very fact of a superabundance calls attention to its causes, and it will be seen that they contain the germ of some of those principles which when full grown will make for a more efficient and satisfactory pedagogy of ethics. Besides that written designedly for student use, there is a voluminous controversial literature. Unfortunately some of this has been tried out on the students, and still more unfortunately, many writers of texts have allowed controversial material to slip into their pages. The difference between a treatise for an ethicist and a text for a student ought to be too well appreciated to demand comment. Such books as Sidgwick's Methods of Ethics, Stephen's Science of Ethics and Bradley's Ethical Studies are obviously not texts, and if used as such are more likely to lead to ethical ratiocination than to a real interest in the live problems of daily morality. A recent text by Fite illustrates the confusion of treatise and text. The nature of the work is indicated in the preface where the author himself says that "the work was begun with the intention of furnishing simply a plain statement of the existing ethical situation. . . . But it was found impossible to make a plain statement without adopting a point of view for the definition of the problem and the theories in question" (27). He expresses the hope also that the book will be of interest to those already familiar with the problems as well as of value to those beginning the study. Some books which have been widely used in teaching are avowedly and clearly devoted to some one school or theory; as, for instance, Bowne (8) and Martineau (55). The former's Principles of Ethics is a critique in the form of an extended essay, with theism as the basis and end of his argument. His frequent dogmatism might be condoned, but what excuse can there be for the omission of a bibliography or full foot notes when references are frequent? And not infrequently the references are anonymous.

However quickly the evolutionary theory may have been adopted and applied by certain schools of ethicists, the incorporation of its attitude in our texts has been long delayed. Religious opposition may account in part for this, but doubtless the failure to appreciate at first what the full significance of evolution in ethical science was to be had quite as much to do with it. Evolutional ethics was at first but a modified form of Utilitarianism and this was sufficient to arouse a hindering opposition. Mark Hopkins ignored it and when Hickok's text was revised in 1901 evolution found no place in its pages. Von Gizycki's manual adapted from the German by Stanton Coit (85) shows the Darwinian influence. Paulsen, although rejecting the evolutionistic hedonism which had sprung up, was nevertheless apparently much influenced by the Darwinian theory in the formulation of his own theory of teleological energism. Muirhead includes a very clear statement of evolutionary hedonism and the points of value and difficulty in it. His section on moral progress, although giving practically no details concerning the evolution of morals, presents very clearly the developmental theory and shows that morals are relative and progressive. Martineau, writing first twenty-six years after the appearance of the Origin of Species and again in later editions, uses evolutionary ethics as illustrative of Hedonistic theories and devotes one chapter to it. Mackenzie, publishing first in 1893 (54), had a broader conception. He presents conduct as evolving from its germs in the lower animals, and a similar treatment of the moral judgment which he conceives as developing from custom through law to reflective principles, from judgments of external acts to that of inner purpose and character, from ideas peculiar to circumstances of particular tribes and nations to ideas that have a universal validity. Brief though this phase of his work is, which today seems superficial, it is nevertheless a herald of what is to come. Although he recognizes the development of ethical judgment, Mackenzie's theistic faith leads him to reject evolution as a theory of ethics. Seth's chief interest is in the development of the personality, and so beyond a few references evolution finds no place in his widely used text. Hyslop's work on the fundamental problems of theoretical ethics, appearing in 1895, recognizes evolutional theory but does not give it much place or significance (46). This delayed recognition of evolution is of course still further due to the lack of thorough presentations of the development of morals and of moral instincts. The monumental studies of these topics made by Sutherland, Westermarck and Hobhouse appeared between 1898 and 1908. Dewey and Tufts have tried to make ample provision for the evolutional attitude toward conduct and for the products of the evolutional studies of morals. Their book is divided into three sections of which the first is devoted to the beginnings and growth of morality. Certain aspects of early group life are first presented; such as, its nature as a political unity and solidarity, as an economic and industrial unit, as a religious unit, etc. Then follow several chapters on the growth of morality through the rationalizing and idealizing process, the socializing process; and the process from custom to conscience. This treatment is amplified by illustration in the Hebrew, Greek and modern civilizations.

For the presentation of the great philosophic problems and the nature of their discussions past and present, there has been no uniformity. Here every man is his own master and each follows the line of his own interest. Generally speaking the less attention has been given to the Greek thinkers and their theories. But the modern discussions of Utilitarianism *vs.* Intuitionism, Determinism *vs.* Indeterminism, and Egoism *vs.* Altruism are clearly reflected in the texts and sometimes presented at length. Evidently there has been a decided difference of opinion concerning the importance of presenting these discussions to the student. Some like Davis (18) would give an introductory course in the elements of ethics and postpone the philosophical quibbles to a later stage, his aim being to provide the student with "a rounded scheme" of ethics by a careful consideration of his obligations to himself and to society before taking him into the various "and often conflicting views of philosophical moralists." Von Gizycki, in his students' manual, presents ethics as independent of metaphysics and theology, and this point is stressed. Mackenzie, on the contrary, concludes that metaphysics is indispensable. Hyslop has devoted an entire text to theoretic ethics. Not infrequently the texts present a confusing discussion of ethical theory. Perhaps their aim was to avoid the tedium of a thorough treatment of the different schools by a briefer presentation of the substance of the argument between them and what the author thought to be the fallacies in it; if so, the aim was commendable but the result has been a bewildering array of references to unfamiliar names and schools. The mere mention of Sidgwick or Stephen or Kant with a few sentences about their position scattered here and there through a discussion cannot be expected to do more than to create confusion. Mackenzie and Seth are both guilty of this to an unfortunate degree. Paulsen and Hyslop have avoided the difficulty by devoting an introductory chapter to the history of ethical theory. Martineau's work is unique in this field. As the title suggests, Types of Ethical Theory, his aim is to classify the types psychologically and under each type to present the system of some representative thinker; his purpose was not, however, historical but to throw a side light on his own system, hence the systems presented, although representative of his types, do not form a complete historical series. In fact, some of the greatest thinkers are omitted entirely. There is no good history of ethics in the English language either for class room work or for general reference. Sidgwick's little history (76) is much too brief and over-emphasizes the English schools at the expense of the presentation of German ethics. There is an excellent source book for collateral reading by Benjamin Rand (67), which is a compilation of selections from the writings of ethicists from Socrates to Martineau, and there is now a good history of ethics within organized Christianity by T. C. Hall (35). For the more intensive study of particular ethical thinkers of the past, a small series of condensations from the originals has been started under the editorship of Prof. E. Hershey Sneath. Three of these have been published; the Ethics of Hegel (81), the Ethics of Hobbes (80), and the Ethics of Hume (45).

Every writer recognizes that ethics is based in large part on psychology, and so states it in his text, but the psychology on which each bases it, wherever it is presented, is with a very few exceptions the traditional faculty psychology. The historical antithesis between body and soul, between emotions and intellect has been preserved and will be so long as ethical writers persist in ignoring the contributions of modern psychology. Ethics admits that it is based upon other sciences; hence it has no right to dictate what the nature of those sciences shall be, but to accept from them whatever they say is the truth. And the psychologist has long said that the faculty psychology was false and hence the attempt to determine the relative moral value of intellect and feeling vain and futile. The tendency now among psychologists is to consider emotions and intellect as of the same original stuff or as so interrelated as to be inseparable for purposes of moral judgment. But writers of ethics texts have been slow to appreciate the significance of the advances made in psychology, in spite of the fact that it has thrown so much light upon the processes involved in ethical judgments and the development of conduct. What psychology is given is treated with such an ethical bias that a student coming to a course in ethics after a course in psychology would scarcely recognize the references to the science he had just left. One would, of course, expect the faculty psychology in the older texts like that of Mark Hopkins, but one would scarcely expect it in Murray (61) published in 1891. It is, nevertheless, there and Murray devotes about one hundred and forty pages to what he calls the psychological basis of ethics. But his treatment of the moral consciousness under the familiar three heads, intellect, feeling, and will, is antiquated and superficial. Martineau's well-known Types of Ethical Theory (55) is a specific attempt to present ethical systems from the psychological view point, but as a text for present use it is of course quite useless because its psychology is that of three decades' ago. No psychologist today would classify Plato, Descartes. Malebranche, and Spinoza as unpsychological; nor would he sharply separate Shaftesbury and Hutcheson from the utilitarian and evolutionary hedonists and treat the former as distinctly an ethics of the feeling faculty and the latter as an ethics of the faculty of sensibility. Muirhead in 1892 happily departs from the faculty treatment of will and considers it as a conscious process. Thus treating it he finds that the moral judgment may apply with equal justice to conduct, self, character, and motive. Mackenzie and Seth, both of whose texts appeared within the next two years, contain but a superficial treatment of the psychological basis. Mackenzie has a section which he calls chiefly psychological, but it is a very general treatment of desires and will, motive and intention, conduct and character, with the suggestion of a faculty psychology. Perhaps there is in this a trace of Martineau. Seth emphasizes the importance of psychology, but his treatment is more ethical than psychological. He moralizes on the significance of deliberation and choice in the formation of character, and stresses habit and instinctive action. On the whole it savors strongly of James' chapter on habit. Davis' whole purpose is different, to postpone the theory of ethics until the student is well grounded in practical ethics, hence his treatment is very brief, apparently it is merely intended to familiarize the student with the significance of the terms, desire, volition, choice, etc. Fite is so absorbed in his own discussion of the classical theories that he has little time for psychology. The Dewey and Tufts text, although it has no section devoted exclusively to psychology, is, nevertheless, pervaded with the contributions of genetic and social psychology. In Mezes' treatment of the origin and development of conscience there is also much of the descriptive genetic method of treatment.

Since ethics came to have a place of its own in the curriculum, there has never been a complete lack of appreciation of the importance of social ethics, although the emphasis and space given to it has depended upon the inclinations and personal interests of the author. Yet there has been an unmistakable tendency toward a greater stress upon social ethics, which may, doubtless, be correlated with the growth of sociology, interest in social welfare, and the general demand of loyalty to the larger group. An interesting and significent index of the early stages of this growth is to be found in the preface to the 1879 edition of Hickok's text which appeared twenty-five years after the first edition. This states that the new edition contains a more complete consideration of the general questions of the state and state authority, with " particular reference to punishment, property, taxation, representation, religion, and education." Strangely enough, however, it still included a lengthy discussion of slavery. Personal ethics, also, in the early texts was stressed, even down to the little details of daily life, but with an arbitrary manner which savors of the heteronomous theological ethics from which the science was then slowly separating itself. Janet and Hopkins belong to this type. In Martineau the personal and social is involved but indirectly, it is apart from his field and purpose. Although Muirhead has an excellent presentation of theory and psychology, he is peculiarly deficient in applied ethics. Mackenzie touches this field but only that: he says that he has not space to more than mention the personal and social problems. Seth includes some of the problems of social ethics, but like Mackenzie in a rather insufficient manner. His great aim is the development of personality and toward that end all that he mentions is designed. The moral life is treated with insight and sympathy evidently born of much thought and of a great soul, but if one is looking for the consideration of the current moral problems of society and social conditions he does not find it here. Nearly a half of Paulsen, however, is devoted to the discussion of these personal and social problems. Illuminated by his winning style, his lectures stimulate a serious consideration of vital questions. But they are lectures and as such are probably better adapted to use as corollary reading than for text book work. Davis' elementary text is, as has been intimated above, devoted almost exclusively to these topics. His first section on obligation discusses in a descriptive discursive manner and in a carefully-chosen sequence these subjects:— Rights, liberty, trespass, law, sanctions, right and wrong, justice, duty and virtue, selfishness, service, charity, welfare, deity. In this section man is presented in his individual relations, while in the second section he is presented in his social relations and the rights and obligations thereby entailed are discussed under the topics,—family, community, state, and church. In this regard Mezes' text has certain peculiar features. Nearly a half of the book is given to the discussion of objective morality the criterion of which is ultimate sentient welfare. The Platonic virtues of courage, temperance, wisdom, and justice with the addition of benevolence are taken up singly and discussed at length, although the treatment is rather more historical than modern. Under temperance the ethical problems of sex and marriage are included but are discussed in very general terms. Justice is treated at length and almost entirely from a legal aspect. This lengthy legal discussion is at least unusual in an ethics text. Two pages only of the section on justice are devoted to the consideration of charity, in which welfare agencies are mentioned in the abstract. Benevolence is treated historically and analytically, i. e., discussing the various feelings involved, as, hostile, friendly, etc. A chapter on welfare is a discourse in a rather abstract manner on Hedonism, Eudemonism and national welfare. The emphasis placed in such a text on the importance of moral education for the development of conscience in the child is unique. Dewey and Tufts have two excellent chapters on the place of self in the moral life and on personal virtues. About a third of their text is given to a discussion of conduct as action in society, but instead of attempting a general survey, they find it best to center attention upon three phases of conduct which are of especial interest and importance; namely, political rights and duties, the production, distribution, and ownership of wealth, and the relations of domestic and family life. In the texts generally the presentation of the individual's relationship to philanthropies and movements for moral improvement tends more to be an abstract discussion of principles; and in the consideration of social problems in ethics, politics, as it has often been termed, the presentation, with the exception of Dewey and Tufts', is more abstract than concrete.

A few books have appeared which represent individual departures in the pedagogy of ethics. Among these are President Hyde's Practical Ethics (43), President King's Rational Living (48), and MacCunn's Making of Character (53). The first of these is just what its name implies, a practical ethics. President Hyde includes no philosophical system nor any theoretical ethics; his book is wholly practical and is a short presentation of the virtues of life and the factors in virtuous living. He takes the different objects of life and presents their several phases, namely, as duty, virtue, reward, temptation, vice of defect, vice of excess, and penalty. The objects of life discussed are,—food and drink, dress, exercise, work, property, exchange, sex, knowledge, time, space, fortune, nature, art, animals, fellow-men, poor, wrong-doers, friends, family, state, society, self, God. It is significant that sex is omitted from the text proper and is treated briefly in the preface. President Hyde says, " It is unwise to intrust a subject so personal and delicate to the vicissitudes of a public class-room." He considers this to be the imperative duty of parents and that which he has put in his preface on the subject is in the nature of an outline for parents. The style of the book is aphoristic, brief, terse, and to the point. Motto-like sentences may be picked up at random. The emphasis is rather on the individual, or from the point of view of self-realization, and public morality, or politics, is rather incidental. Welfare agencies and movements for civic betterment are mentioned in the abstract. President King's text is an effort to present or to call attention to the moral aspects, or contributions, of psychology. He thus presents the importance of habit-forming, mental hygiene, as well as physical hygiene, exercise of body and phases of mental activity, as will and attention, with some slight philosophical and educational suggestions. MacCunn's Making of Character is written from an entirely different view point, but a suggestive one. It is written for schools and training colleges and its purpose is educational. Its scheme is the presentation of the factors and forces to be met and used in the building of character. The first part discusses the congenital endowment and its manifestations in temperament, also the instincts, desires, capacities, development and repression, and habit. The second part concerns the educative influences,— the bodily health, family, livelihood, citizenship, religious organizations, social influences, power and use of example, precept, etc. Another part is on soundness of judgment and concerns the education of the moral judgment, the growth of the individual ideal, the practical value of theory, etc. A fourth and last part presents the facts of self-development and control. It is written simply, clearly, and in a stimulating manner. The aim is for a dynamic rather than a static treatment of facts of the moral life. For the teacher of social ethics there are now several bibliographies of literature for both direct and corollary use: such as, the Harvard bibliography for reading in social ethics and allied subjects (38), that on business morals by Edwards (23), and that by the Fabian Society (24).

Conclusion

Prophecies are proverbially dangerous, but by way of summary and conclusion it may be wise to indicate in brief the probable nature of the ethics text and course of the future as indicated by the facts brought together in the foregoing. It is evident that it can not be a presentation of arid theories, which have so characterized the ethics of the past. In the demand for an improvement of the moral conditions of college life and of the morals of its product is the call to differentiate between the presentation of moral speculation and the preparation for a life of moral activity. It means that the ethics course is to be based first of all upon the immediate and the future needs of the student. If moral philosophy, speculative ethics, is taught at all, it will be presented in an advanced course. The practical must take precedence over the theoretical. The course will be dominated by the spirit of moral efficiency, the preparation for and attainment of efficient moral character. Every effort will be made to clear the path to such attainment over every obstacle. The essence of the great moral problems of the past will be included because of their reality in the life of every individual, but they will appear divested of their archaic terminology and reference. This to guide the formation of ideals. In the place of the disappearing external authorities will be built up the internal authority, largely unconscious, based on experience, breadth of moral vision, the feeling of honor, self-respect, sympathy and the feeling of personal superiority to anything beneath the most virile of moral standards. The whole tempered and vitalized by the religious spirit and attitude.

As the attitude of fatalistic determinism is dangerous to the moral progress of the individual and to the formation of progressive ethical ideas, it must be combated by a presentation of the fact and the power of the feeling of freedom as looked at by genetic psychology, a position which is at once true to the causal interpretation of science and to the fact of personal influence in the moral progress of the individual and the race. The evolutional attitude dominant in the other natural sciences must be dominant in ethics. But for pedagogical and moral reasons the evolution of ethics needs to be presented with its emphasis upon the family and the home. The evolutional study of ethics. presented rather briefly, will be designed to impress the student with the age and power of the moral instinct and how from the home it has grown out to include the community, the nation and the race. Special stress will be laid on the moral value of the family and the home and the principles of moral education. The moral life will be presented as active, not as the mere passively sinless. The ideal is moral efficiency, which includes in its scope physical, mental, and moral power. For the development of these there must be ample consideration of the facts of personal hygiene which lead out into the larger problems of community and national hygiene. And the newer science of eugenics because of its vast moral significance will find an increasing place in ethics. In its breadth and its ideals it reaches to the depths of the rapidly enlarging social consciousness of the adolescent and can be used to arouse feelings of self-respect, of obligation to "pass on the torch of life undimmed," and of a religious reverence for the vast power of life of which he is a part, and of which a part is to him intrusted. Its reverential attitude toward the phenomena of procreation transfigure the sex problem. Conditions indicate the need of sex instruction and from the eugenic point of view it will have a place in ethics. As a part of the youth's preparation for the morally efficient life, must be included the moral problems peculiar to the different vocations, much of the work and needs of the different agencies for social betterment and moral reform which he may have occasion to use or to coöperate with, and in considerable detail the newer moral problems, individual, civic, commercial, and political, which are being faced by the world today by virtue of the new social conditions of life.

The new ethics will strive to cultivate efficiency, the broadest and deepest sympathy, and honor, as the all inclusive virtues. It will make a far greater appeal to the feeling side of life than the old ethics, because it will realize that the larger part of the moral life is governed by emotion. And that in the teaching of ethics the more lasting impression may be made if the emotion is aroused. To do this many concrete illustrations of actual cases which have been faced and conquered, or which still remain to be overcome, will take the place of the appeal by theory to the reason. Other factors, too, than the ethics course will be taken into consideration in the control of the development of the students' moral sense. A greater effort will be made to ascertain the actual factors which must impress the student and when so ascertained to direct them in the most beneficial manner. Some of these college problems will be brought into the ethics class as concrete material. The tremendous power of "college spirit" will be recognized and used. As experience is one of the most vital factors in the cultivation of character, modes of expression of the moral feeling aroused will be provided for, and wherever possible within the campus walls as well as without. The students in the ethics course are usually older students and through their activities the college spirit can be moulded. By this means the great power of moral tradition may be gradually changed until it becomes effective as the moral check of public sentiment is in the life of the world, or even more so. The ethical value of college experiences will be recognized to a greater degree and provision made whereby more can participate in them. The thrill of success which comes with victory in athletics, in academic competition of all sorts, in any kind of college activity which brings the applause of fellow-students, will be recognized to have its moral value, and along with it will be cultivated the even greater thrill of personal power which accompanies the recognition of a moral victory. For all this there is needed the teacher of peculiar ability. Mere interest and facility with the ethical philosophies is not sufficient. It will demand a wholesouled individual who knows and loves to deal with the moral problems of the college youth. It will demand, to borrow President Eliot's happy phrase, young men or men who never grow old.

The writer desires especially to acknowledge his indebtedness to Dr. Wm. H. Burnham, Dr. Theodate L. Smith, and Mr. Louis N. Wilson for invaluable assistance in the preparation of this paper, and to President G. Stanley Hall and the faculty of Clark University for fellowship appointments.

BIBLIOGRAPHY

1. ALLEN, WM. H. Civics and Health. Boston, Ginn, 1909. 411 p.
2. —— ——. Efficient Democracy. New York, Dodd, 1907. 346 p.
3. BARNES, EARL. Student Honor: A Study in Cheating. *Int. Jour. of Ethics,* 1903-4. Vol. 14, pp. 481-488.
4. BEGBIE, HAROLD. Twice Born Men. New York, Revell, 1909. 280 p.
5. BIRDSEYE, C. F. Reorganization of Our Colleges. New York, Baker Taylor, 1909. 410 p.
6. BLOOMFIELD, MEYER. Vocational Guidance of Youth. New York, Houghton, 1910. 124 p.
7. BOSANQUET, HELEN. The Family. London, Macmillan, 1896. 344 p.
8. BOWNE, B. P. Principles of Ethics. New York, Harpers, 1892. 309 p.
9. BRIGGS, L. R. School, College and Character. Boston, Houghton, 1901. 148 p.
10. BROCKMAN, F. S. A Study of Moral and Religious Life. *Ped. Sem.,* 1902. Vol. 9. pp. 255-273.
11. BURBANK, L. The Training of the Human Plant. New York, *Century,* 1907. 99 p.
12. BURNHAM, W. H. Study of Adolescence. *Ped. Sem.,* 1891. Vol. 1. pp. 174-195.
13. CABOT, ELLA LYMAN. Ethics for Children. Boston, Houghton, 1910. 262 p.
14. —— ——. Everyday Ethics. New York, Holt, 1906. 439 p.
15. CLOUSTON, T. S. Hygiene of the Mind. London, Methuen, 1906. 284 p.
16. CURTIS, EDW. Nature and Health. New York, Holt, 1906. 313 p.
17. DAVENPORT, C. B. Eugenics. New York, Holt, 1910. 35 p.
18. DAVIS, N. K. Elements of Ethics. Boston, Silver Burdett, 1900. 200 p.
19. DEWEY, J. and TUFTS, J. H. Ethics, New York, Holt, 1908. 606 p.
20. DOCK, LAVINIA. Hygiene and Morality. New York, Putnams, 1910. 200 p.
21. DUGDALE, R. L. The Jukes. New York, Putnams, 1910 (4th ed.). 121 p.
22. EBBINGHAUS, HERMANN. Psychology (Trans. from German and ed. by Max Meyer). Boston, Heath, 1908. 215 p.
23. EDWARDS, R. H. Business Morals. (Bibliog. of 33 p). Studies in American Social Conditions No. 7. Madison, Wis., 1910. 56 p.
24. Fabian Society. What to Read on Social and Economic Subjects. London, King and Son, 1910. 62 p.
25. FAY, E. A. Marriages of the Deaf in America. Washington, Volta Bureau, 1898. 527 p.
26. FISHER, IRVING. Report on National Vitality. Bulletin 30 of the Com. of One Hundred on National Health. Washington, Gov. Ptg. Office, 1909. 138 p.
27. FITE, WARNER. An Introductory Study of Ethics. New York, Longmans, 1903. 373 p.
28. FOREL, A. H. Hygiene of Nerves and Mind. New York, Putnams, 1907. 343 p.
29. —— ——. The Sexual Question. New York, Rebman, 1908. 536 p.
30. GALTON, FRANCIS. Memories of My Long Life. London, Methuen, 1908. 339 p.

31. GODDARD, H. H. Heredity of Feeble-Mindedness. *Eugenics Rev.*, 1911. Vol. 3. pp. 46-60.

32. HADLEY, A. T. Standards of Public Morality. New York, Macmillan, 1908. 158 p.

33. HALL, G. STANLEY. History of American College Text Books. *Proc. of Am. Antiq. Soc.*, 1894. N. S. Vol. 9. pp. 137-174.

34. —— ——. Educational Problems. New York, Appleton, 1911. 2 Vols.

35. HALL, T. C. History of Ethics within Organized Christianity. New York Scribners, 1910. 605 p.

36. HALL, W. S. From Youth into Manhood. New York, Association Press, 1910. 106 p.

37. —— ——. Reproduction and Sexual Hygiene. Chicago, Ray, 1907. 149 p.

38. Harvard University. A Guide to Reading in Social Ethics and Allied Subjects. Cambridge, Mass., 1910. 265 p.

39. HICKOK, L. P. A System of Moral Science. Boston, Ginn, 1901. (Rev. ed.). 288 p.

40. HOBHOUSE, L. T. Morals in Evolution. New York, Holt, 1906. 2 Vols.

41. HODGE, C. F. Instruction in Social Hygiene in the Public Schools. *School, Science and Math.*, 1911. Vol. 11. pp. 304-314.

42. HOPKINS, MARK. The Law of Love and Love as a Law. New York, Scribners, 1909. 384 p.

43. HYDE, W. D. Practical Ethics. New York, Holt, 1892. 203 p.

44. —— ——. The College Man and the College Woman. Boston, Houghton, 1906. 333 p.

45. HYSLOP, J. H. The Ethics of Hume. Boston, Ginn, 1893. 275 p.

46. —— ——. Elements of Ethics. New York, Scribners, 1895. 467 p.

47. JANET, PAUL. Elements of Morals. New York, Am. Book Co., 1887. 353 p.

48. KING, H. C. Rational Living. New York, Macmillan, 1906. 271 p.

49. LINDSEY, B. B. and O'HIGGINS, H. J. The Beast. New York, Doubleday, 1910. 340 p.

50. LORAND, ARNOLD. Old Age Deferred. Phila., Davis, 1911. 472 p.

51. LOWRY, EDITH B. Confidences. (Talks with a Young Girl.) Chicago, Forbes, 1911. 94 p.

52. —— ——. Truths. (Talks with a Boy.) Chicago, Forbes, 1911. 95 p.

53. MACCUNN, JOHN. The Making of Character. Cambridge, Univ. Press, 1900. 222 p.

54. MACKENZIE, J. S. Manual of Ethics. London, Univ. Press, 1907. (4th ed.). 453 p.

55. MARTINEAU, JAMES. Types of Ethical Theory. Oxford, 1891. (3rd ed.).

56. MEZES, S. E. Ethics: Descriptive and Explanatory. New York, Macmillan, 1901. 425 p.

57. MILLER, E. A. Moral Conditions in Ohio Colleges. *Educ. Rev.*, 1910. Vol. 39. pp. 500-510.

58 MORLEY, MARGARET W. The Renewal of Life. Chicago, McClure, 1906. 200 p.

59. MOSSO, A. Fatigue. (Trans. by Drummond). New York, Putnams, 1904. 334 p.

60. MUIRHEAD, J. H. Elements of Ethics. London, J. Murray, 1892. 235 p

61. MURRAY, J. C. An Introduction to Ethics. Boston, Dewolfe Fiske, 1891. 407 p.

62. Northcote, Hugh. Christianity and Sex Problems. Phila., Davis, 1907. 257 p.
63. Paulsen, F. System of Ethics. New York, Scribners, 1899. 712 p.
64. Payot, Jules. The Education of the Will. New York, Funk & Wagnalls, 1909. 424 p.
65. Perry, R. B. Moral Economy. New York, Scribners, 1909. 267 p.
66. Pyle, Walter L. (Editor). A Manual of Personal Hygiene. Phila., Saunders, 1907. 451 p.
67. Rand, Benj. The Classical Moralists. New York, Houghton, 1909. 790 p.
68. Rentoul, R. R. Race Culture; or, Race Suicide? London, Scott, 1906. 182 p.
69. Ribot, T. A. Diseases of the Will. Chicago, *Open Court*, 1896. 137 p.
70. Ross, E. A. Sin and Society. Boston, Houghton, 1907. 167 p.
71. Saleeby, C. W. Health, Strength and Happiness. London, Grant Richards, 1908. 448 p.
72. —— ——. Parenthood and Race Culture. London and New York, Cassell, 1909. 331 p. (Includes good bibliog. on eugenics).
73. Scott, J. F. The Sexual Instinct. New York, E. B. Treat, 1908. 473 p.
74. Seth, James. Ethical Principles. New York, Scribners, 1905. (8th ed.). 460 p.
75. Sharp, F. C. A Study of the Influence of Custom on the Moral Judgment. *Bulletin* 236 *Univ. of Wis.* Madison, 1908. 144 p.
76. Sidgwick, Henry. Outlines of the History of Ethics. London, Macmillan, 1886. 271 p.
77. Sisson, E. O. The Essentials of Character. New York, Macmillan, 1910. 214 p.
78. Smart, I. T. What a Father Should Tell His Son. New York, Bodmer, 1911. 103 p.
79. —— ——. What a Mother Should Tell Her Daughter. New York, Bodmer, 1911. 113 p.
80. Sneath, E. H. The Ethics of Hobbes. Boston, Ginn, 1898. 377 p.
81. Sterrett, J. M. The Ethics of Hegel. Boston, Ginn, 1893. 216 p.
82. Sutherland, Alex. Origin and Growth of the Moral Instinct. London, Longmans, 1898. 2 Vols.
83. Tanner, Amy E. The College Woman's Code of Honor. *Ped. Sem.*, 1906. Vol. 13. pp. 104-117.
84. Titchener, E. B. A Text-Book of Psychology. New York, Macmillan, 1910. 558 p.
85. Von Gizycki, G. Student's Manual of Ethical Philosophy. (Adapted from German by Stanton Coit.) London, Sonnenschein, 1889. 304 p.
86. Warner, A. G. American Charities. (Revised by Coolidge.) New York, Crowell, 1908. 510 p.
87. Welpton, W. P. Principles and Methods of Physical Education and Hygiene. London, Clive, 1908. 401 p.
88. Westermarck, E. A. Origin and Development of the Moral Ideas. London, Macmillan, 1906-8. 2 Vols.
89. Woodhull, A. A. Personal Hygiene. (Designed for Undergraduates.) New York, Wiley, 1906. 221 p.
90. Yearsley, M. Eugenics and Congenital Deaf-Mutism. *Eugenics Rev.*, 1911. Vol. 2. pp. 46-60.

PLANS OF CLASSIFICATION IN THE PUBLIC SCHOOLS

By W. H. HOLMES, Ph. D.
Superintendent of Schools, Westerly, R. I.

Several of the most important plans of grading and promotion in the United States are presented in this paper. Since the short interval, or St. Louis plan, is really the parent of all plans of grading in this country it will be first considered. It will be followed by the Shearer, or Elizabeth plan, which is only a modification of the St. Louis plan. The concentric plan, the North Denver plan, and the group system will then be described, followed by the well-known Cambridge double-track plan and its modifications, the Odebolt and Le Mars, Iowa, plans. The Portland, Oregon, plan is briefly treated. Two German plans will then be explained: those of Charlottenburg and of Mannheim, the latter plan having been widely adopted in Germany.

After a brief introduction, presenting the views of superintendents and normal school principals as to whether the all-class method of instruction is satisfactory as a means of reaching the individual pupils, an exposition is given of the three best known plans of individual instruction, the Pueblo, Batavia, and Newton plans, the section closing with a suggestive plan combining the good points of several that have been presented.

It may be added that there are other plans of grading and of instruction that have attained considerable prominence, but they are so similar in their main features to the plans here presented that it has not been deemed worth while to present them.

THE ST. LOUIS PLAN

The first comprehensive discussion of the subject of a plan to introduce flexibility into the classification of the graded school system was made by the late Dr. William T. Harris in his reports as superintendent of the St. Louis public schools, during 1868-9 and 1871-72-73. In these discussions he explained the short interval system of promotion as carried out in St. Louis, by which plan pupils, in the lowest grades at least, were to be promoted every five or six weeks during the school year. These three reports aroused widespread discussion among school superintendents throughout the country, some opposing, some supporting. In the report for 1873-74, Dr. Harris entered into a still more detailed discussion of his plan, quoting at length the opinions of several prominent school officials who favored the plan, and also of those who were opposed to the short interval system.

As all the short interval plans are in a way modifications and adaptations of the St. Louis plan it will be well to discuss its chief features at some length.

1. Pupils differ greatly in their ability to do the work of the grades. A pupil entering the first grade at eight years of age can make nearly double the progress that can be made by a pupil of five years of age. The bright, nervous child will be able to advance more rapidly than the one who is dull and stolid.

2. Unless the school provides for these different rates of progress by frequent reclassification, the bright pupils not being held up to work of which they are capable will acquire habits of carelessness and listlessness, while the dull pupil being compelled to move forward at a too rapid pace, will become demoralized and disheartened.

3. Furthermore, the attendance of some pupils is far more regular than that of others, absence being due to sickness, necessity of working for a living, and other causes.

4. Because certain pupils are able to move forward over the course of study at a more rapid rate than their mates and because large numbers of pupils in the upper grades are constantly leaving, some provision must be made to restore the proper quota of pupils to the teachers of the upper grades. This can be done, according to Dr. Harris' plan, by a reclassification and promotion of pupils in the different grades every ten weeks "or once in a quarter or term."

5. Frequent promotion is not to be made by classes, the few best ones in each section or class are to be united with the class or section above. Such a promotion through the different grades will result in bringing together in each section or class pupils of fair, average, and poor ability, together with a few of superior ability who at the time of promotion will stand at the foot of the class. "For a while," writes Dr. Harris, "the average and fair scholars in the class will have the stimulus of being the best in the class. The poor ones will rank as 'middling' and the new pupils will begin as the poorest and slowly work up toward the top of the class. The advantage to the self-respect of the slower pupils which comes from standing in relation to their classmates as abler and better informed is not to be lost sight of."

5. Under this plan where in a large building there are several large sections of the first or second grade, the bright pupils would change teachers several times in one year, but in the upper grades with their small enrollment, the bright pupil would be advanced from division to division, according to Dr. Harris, and still remain one year or more under each teacher.

6. By this plan of promoting the few best, rather than demoting the few poorest, it is claimed that the maximum of encouragement is attained since those remaining in the section after each special promotion do not feel that they have been "left back."

7. If promotions to the high school are made only once a year, the graded schools will be obliged to so arrange their upper classes as to conform to this order of things and the other grades from the first on must follow the same plan.

A class finishing the work of one grade before the end of the year would not be able to begin the work of the next grade until the beginning of the new school year. "The utter want of elasticity in the classification of the upper grades of the district schools," to quote Dr. Harris, "arising from the lack of frequent promotions to the high school, works violence continually to the interests of one-third of the pupils. All those delayed through sickness, the necessities of poverty, or inactive temperaments, either fall back a whole year, or else in a vain endeavor to make up their deficiency overwork themselves or get discouraged." In considering this plan one must bear in mind that it was devised by Dr. Harris as a means of filling up the upper grades of the St. Louis schools which were constantly being depleted by the withdrawal of pupils. It was primarily a plan for hurrying along the bright pupils. "The slow pupils," to use Dr. Harris's own words, "advance only when ready." It is easy to see that under such a plan the bright pupils would be the objective point of the teacher's exertions and the slow pupils would be allowed to drift along. There is reason to believe that even a slow pupil after being passed again and again by his more rapid-minded mates would at last wake up to the fact that he was "stranded" in the stream of progress.

It is maintained that the only disadvantages incident to the plan are connected with the frequent changing of teachers. This objection is dismissed by asking the question if it is desirable to keep a pupil back in his studies in order that he may recite for a long time with one teacher. This answer is hardly fair since there are ways of keeping pupils with a teacher, for a year at least, while still allowing them to make rapid progress.

Yearly promotions to the high school are said to be detrimental to the interests of at least one-third. Yet there are school systems that have yearly promotions and that make little of "sectioning" the lower grades, where for five years the percentage of pupils failing to earn promotion from grade to grade in the elementary schools, has averaged each year less than seven. The best evidence of the efficiency of the plan would be from the records of the public schools of St. Louis. It is, however, a significant fact that after all these years with the short interval of grading, both in St. Louis and Kansas City, there exists a large amount of retardation in their schools.

The Elizabeth Plan

The Shearer, or Elizabeth plan, of grading was developed and perhaps best carried out during Mr. Shearer's superintendency at New Castle, Pennsylvania. The name, Elizabeth plan, came about from the fact that after Mr. Shearer left New Castle to assume the superintendency of the schools of Elizabeth, New Jersey, he put the plan into operation in the schools of the latter city, but the plan was never carried out in the latter place in any thorough-going manner and is not in use there at the present time. Under the plan each of the eight grades is divided into three or four sections according to the abilities of the pupils. Each of these sections is allowed to do just as much work and go forward just as fast as it is able. There are no promotional examinations and as soon as a pupil shows ability to do the work of a higher section he is advanced to that section. Progress is gauged by the work on the sequential studies, reading and number in the lower grade, language and arithmetic in the higher grades.

The advantages of the plan are stated in Superintendent Shearer's own words.[1]

"1. It makes possible a frequent reclassification which is the only means of preventing the sacrifice of the pupils of the graded school. When a pupil gets ahead or behind his own class, he is at once moved a short distance forward or back, where he can work to advantage.

"2. An accurate grading of pupils, according to ability into classes of from ten to fifteen, instead of herding them in classes of fifty, furnishes a practicable means of reaching each individual.

"3. Every pupil is touched with hope and with enthusiasm; for the progress of each one depends entirely on ability and application.

"4. Forty-two per cent of the pupils in the highest grammar grade, having finished the work of that grade by January, at once started upon the work of the high school, and will be able to graduate in three years instead of four years.

---

[1] Discussion N. E. A. Proceedings, 1895, pp. 408-9.

"5. By the end of the first year's trial of the plan, forty-five per cent of the pupils below the high school had gained from one-fourth to two-thirds of a year's work, without any urging on the part of the teachers."

The writer after an experience of several years in schools graded under the plan would make the following criticism of it:

1. It is not essentially different from the plan advocated and carried out by Dr. William T. Harris in the St. Louis schools from 1871 to 1873.

2. It is essentially a plan for enabling bright and often superficial pupils to move rapidly through the grade.

3. Because of this aim, the teacher puts her energies on the best pupils. The slow and dull pupils do not receive the attention that they need.

4. The number of divisions dissipate the energies of the teacher and poorer work is the result.

5. Since there are so many divisions a large number of pupils are engaged for long periods in seat work or "busy work, which often is rendered worse than valueless because the teacher has no time to supervise it properly. Two sections are all that any teacher should be obliged to look after.

This plan has been widely advertised as the result of an article, "The Lock-Step of the Public Schools,"[2] written by Mr. Shearer in 1897 for the Atlantic Monthly and widely commented on by the press of the country. It is also fully explained in a book, "The Grading of Schools," written by Mr. Shearer. The above-mentioned article and Mr. Shearer's book, together with many newspaper articles and addresses by him, have done a great amount of good in calling attention to the need of a better organization of the graded schools in order to adjust them to the needs of the individual child.

THE SANTA BARBARA CONCENTRIC PLAN

According to this plan children in each grade are divided into three groups so that each grade has A, B and C sections. "The sections do the work of the grade concentrically." The extent of the work so far as the fundamental principles are concerned is the same for each of the sections, but the B pupils do more extensive work than the C pupils and the A more than the B pupils. In arithmetic, for example, the C pupils would take only such work under a certain topic as would enable them to advance to a consideration of the succeeding topic; the B pupils would do more difficult work while the A pupils would approach the subject in a more thorough manner, learning, perhaps, short processes and methods of proof, things beyond the powers of a great many pupils.

---

[2] Atlantic Monthly, Vol. LXXIX, pp. 749-757.

When the A pupils of any grade are ready for the work of the next grade they are transferred to the C section of that grade, while there may be constant transfer from section to section within the grade.

This plan was carried out in the schools of Santa Barbara, California. Mrs. Burk[3] has made a very interesting study of the results of the plan, showing the number of sections covered by 835 children during a school year.

No. of Sections......	0	1	2	3	4	5	6	7	8
No. of Children.....	28	58	195	369	74	75	30	1	5

From this record it can be seen that if we adopt three sections of work a year as the normal, that 34% of the children made slow progress, 44% normal progress, while 22% made rapid progress. In this study it is shown that 35% of the slow children were absent over 20 days as compared with 33% of the normal and 23% of the fast children. It is also shown that in the first three grades 47% of the children were slow, 36% normal, and 17% fast. In the fourth and fifth grades 16% were slow, 53% normal, and 31% fast, while in the sixth, seventh and eighth grades 30% were slow, 50% normal, and 20% fast. This study would seem to indicate the truth of what a great many school men believe, that the course of study for the first two or three grades and that of the higher grades is too difficult for a large number of children. The study also takes the scientific point of view, emphasizing the fact that "the normal child of one year is not the normal child of another year." Other studies along the same line would do much to counteract the evil which many studies in school retardation are now doing by overemphasizing the over-age problem of the schools. The overage problem in the schools is not to be solved by lowering the compulsory attendance age from seven to six as Superintendent Maxwell of New York City seems to think. School attendance in the German cities where the compulsory age is six makes this evident. The problem of retardation and elimination is as great a problem with them as with us. The studies in retardation have doubtless done much to direct attention in the right way but they are lame and halt in many respects. They fail to take account of local conditions in their comparative estimates, judging by the same standard the city in which the children enter school at five years and another city in which the larger part of the children do not enter school until after they have reached the age of six.

---

[3] Educational Review, Vol. 19, p. 299.

Cambridge Plan

The plan of grading that has been most often described in books on school administration is the so-called Cambridge double-track plan. This plan was evolved and was in use in the schools of Cambridge, Massachusetts, for many years. It has now been replaced by a somewhat different plan. It was applied only to the last six years of a nine-year course of study. Under this plan, running parallel with the regular six-year course, was a shorter course by which abler pupils might accomplish the regular work in four years. These four sections of the work were called the A, B, C, and D grades. A pupil entering and completing this course, saved two years in the nine-year course. There were, as can be readily seen from the accompanying diagram, two other ways of completing the course with a saving of one year in each case. A pupil could complete the A and B grades in two years and then at the close of the year be promoted to the regular seventh grade, thus completing the course in eight years; or he might save a year by progressing regularly through the fourth, fifth and sixth grades and then, by being transferred to C grade, complete the work in the two succeeding years. The plan was carried out in this way. All the pupils began the fourth grade on, as it were, the same line of attainment. As soon as possible the pupils were separated into a slow and fast division, the slow division constituting the regular fourth grade and the fast division the A grade. The pupils of the A grade did the work of the fourth grade and about one-half the work of the fifth grade. The next year the slower pupils constituted the regular fifth grade while the faster pupils were promoted to the lower division of the sixth grade and during the year accomplished the remaining half of the fifth grade work and also the work of the sixth grade, so that at the end of the year they were abreast of the regular sixth-grade pupils. In a similar manner the brighter pupils of grade six were promoted to grade C, and by doing a half-year of extra work each of the two succeeding years, finished the course in grade nine with the pupils who began the sixth grade three years previous.

Under the plan there must be two divisions or classes for at least the major part of the time in the fourth, sixth, seventh and ninth grades. The regular fifth and eighth grades will be composed of the slower pupils and will work as one class.

OBJECTIONS TO CAMBRIDGE PLAN

The following objections to the plan are presented by a Cambridge teacher:

1. "In order to make fast or skipping classes large enough to make them worth while, it is necessary to place in them children who cannot do the work as it should be done.

2. The children in these skipping classes go over the work so rapidly that they do not get the thorough systematic drill that they need.

3. The selection of the best pupils from the regular classes leaves an accumulation of slowness and the teachers complain of the dullness of their classes.

4. It allows for promotion only once a year." There seems however to be no good reason why in buildings employing sixteen or more teachers this plan could not be fitted to the half-year interval plan of promotions. This could be done by dividing the course of study into two parallel courses: a longer one of 18 sections and a shorter one of 12 sections. The transfer point would occur just twice as often as under the yearly plan.

LE MARS, IOWA, PLAN

The Le Mars plan is the Cambridge plan applied to the nine grades instead of only the last six grades.

The courses of study are made out covering the same amount of ground but differing in the time required to do the work; one requiring six years, the other nine years. These courses run parallel with each other and are so arranged that they articulate with each other at different points along the line. Classes are so graded that they come together at different points, thus allowing for a transfer of pupils in either direction without a loss of any portion of the course of study. The short course of six years is divided into three two-year cycles and the long course of nine years into three three-year cycles. The end of each cycle is a transfer point. The grades of the short course are designated by the letters A to F; those of the long course, by the figures one to nine. The plan is worked out in this way: Grades 1 and A begin work together, but soon after beginning the work of the year the two grades or divisions begin to diverge in their work so that at the end of the year grade one has completed one ninth of the work, and grade A one-sixth of the work. At the beginning of the second year the pupils of grade one are promoted to grade two, while the pupils of frade A are promoted to grade B and begin work in the room with the pupils constituting grade three. The early part of the work of grade B is more elementary than that of grade three, but grade B with its abler pupils finally overtakes grade three so that at the end of the year the pupils of the two grades have finished one-third of the course.

Results of the Plan

In June, 1908, 60% of all the pupils in the Le Mars schools were promoted to the nine-year course; 40% to the six-year course; 48% of the promotions were transfers.

In Odebolt, Iowa, where this plan is in use, at the end of the sixth year 54% of the pupils were in the nine-year course and 46% in the six-year course.

The record of promotions made in the Odebolt schools for the four years ending June, 1908, is as follows:

Regular promotions in the six-year course	34.5%
Regular promotions in the nine-year course	29.3%
Transfer promotions	35.5%
Non-promotions	1.7%

For this period 29% of the pupils worked altogether in the six-year course; 22% altogether in the nine-year course, while 49% worked in both courses. The lines in the diagram represent the different actual courses as the resultant of the two parallel courses articulating. Course 1 is the regular nine-year course. Course 2 takes a pupil through grades 1, 2, 3, C, D, E, F, completing the work in seven years. Course 3 carries pupils through grades 1, 2, 3, 4, 5, 6, E and F, completing the work in eight years. Course 4 carries one through grades 1, 2, 3, C, D, 7, 8 and 9 in eight years. Courses 5 and 6 are each seven years in length. Course 7, eight years, and Course 8 is the regular six-year course. Thus, beside the two regular courses there are three seven-year courses and three eight-year courses. Under the plan there are four kinds of promotions: the "regular" promotion by which a pupil is passed from one grade to the next higher in the same course, the "transfer" promotion by which a pupil is placed in the next higher grade of the opposite course occur at the end of the year. The "advanced transfer" promotion by which a pupil is transferred 4 to D out of course to the next higher grade of the opposite course (such a transfer necessitates skipping certain portions of the work) and the "retarded transfer" promotion by which a pupil is placed in a lower course and given the benefit of a review before taking up advanced work (but without loss of time) may occur at any time during the year.

The intervals that separate the different classes may be seen from the following table:

TABLE OF INTERVALS BETWEEN CLASSES

Between Grades.	Time.	Interval.
4 and C,	Beginning of year,	Zero
4 and C,	End of 3rd month,	4 weeks
4 and C,	Middle of year,	6 weeks
4 and C,	End of 6th month,	8 weeks
4 and C or 5 and C,	End of year,	12 weeks
5 and C or 6 and D,	Beginning of year,	12 weeks
6 and D,	End of 3rd month,	8 weeks
6 and D,	Middle of year,	6 weeks
6 and D,	End of 6th month,	4 weeks
6 and D,	End of year,	Zero

The table shows that the interval between two classes throughout the course is never more than twelve weeks and for most of the time only four to eight weeks. Thus opportunity is afforded frequently to adapt the course to the needs of both the slow and the quick child. The pupil of superior ability is not compelled to mark time. The pupils of slower development are not compelled to hurry over the work. The course is pliant at all points. The pupil is promoted on the estimate of the teacher and as soon as the work at any point in the course becomes too hard or too easy for a pupil, such pupil is reclassified.

PORTLAND, OREGON, PLAN

A unique system of classification and promotion has been in use in Portland, Oregon, since 1897. It superseded the orthodox eight-grade system with semi-annual promotions.

The course of study is divided into fifty-four parts covering in time eighteen terms of five months each. Promotions take place at the close of each term. A unit composed of three terms is called a cycle. While classes are permitted to go forward at the rate best suited to their powers, the two standard rates are three parts per term for the slower divisions and four parts per term for the faster divisions.

The normal class interval at the beginning of a cycle is three parts of the course of study measured not in time but in work. In large schools the class interval is often only two parts of the course. Sometimes in the lower classes only one part of the course separates the classes.

At the beginning of a cycle such pupils as have reached the same point of progress in the course of study are classified in two divisions; the first division is to advance at the rate of four parts per term while the second division is advancing three. It can be readily seen that by going forward at the same rate, at the end of three terms, the first division will have covered twelve parts of the course and the second division will have covered nine. At the end of each cycle each first division will have reached the same point in the course as the second division next above. Again a reclassification will take place and the first and second divisions will begin another cycle and so on in like manner until the fifty-four parts of the course are completed. The pupils who remain in the first division throughout the course will complete the work in seven years. Those who remain in the second division throughout will complete it in nine years.

North Denver Plan of Instruction

Superintendent James J. Van Sickle, now of Springfield, Massachusetts, devised a plan while superintendent of the North Side School of Denver, Colo., for producing "greater flexibility in class management, especially in the grammar grades." He contended that "the short and varying intervals in the primary grades together with the half-year interval in the upper grades were sufficient for the ordinary class organization of the school. The finer adjustments in individual cases should be made within the class. No mechanical plan of grading can adjust itself to the individual differences of the pupils." "The child," says Van Sickle, "who is strong in arithmetic may show less strength in language, while another, good in both, may need more time in geography or history, and so on in indefinite variety,—while the average strength of the individuals composing the class may not vary greatly. No matter how carefully we grade, we find these differences."

The ordinary recitation is ill adjusted to the varying gifts of the pupils: if the bright pupils' ability is made the standard of class speed the average and the slow are hurried on too fast; and bright pupils lose interest and develop wasteful habits, if the standard is adjusted to the abilities of the average and slow pupil.

"Is it not possible," says Mr. Van Sickle, "to retain the manifest advantages of the class recitation, so often set forth by Dr. Harris, and yet as the recitation progresses allow individual pupils to drop out and do other work more profitable than simply maintaining the semblance of attention?"

AIMS OF THE PLAN

1. To secure a more profitable use of the pupils' time.
2. To train each pupil to use his own judgment by co-operating with the teacher in deciding what he had better do at a given time.
3. To lead the pupil in this way to put forth more willing effort in the mastery of the less agreeable studies, such effort aiding to keep the pupil up to the level of the class.
4. To secure more study time in school and thus do away with the need of keeping after school (staying after school, says Van Sickle, is quite a different matter).
5. To enable the pupil to demonstrate his fitness for special promotion.
6. To bring about conditions that will awaken enthusiasm for improvement in efficiency and in knowledge, by emphasizing the fact that it is individual power, the excelling of one's self, that counts, rather than class marks, special seats, or the other school rewards given for excelling one's mates.

The main aim is thus to develop individual initiative and responsibility by leading the pupil to decide for himself when he is ready to do certain work or when he has finished such work, and to develop the will power necessary to do a piece of work alone. Under the usual plan of organization the teacher makes all the decisions; the pupils have no opportunity to develop independence of power that comes through making choices of real value. It is for this reason that the school-room is often inferior in its educational power to the athletic field; in the schoolroom the pupil is too often being developed; on the athletic field he is developing himself. It is the self-activity,—the subjective power that counts for most in education.

PROCEDURE IN CARRYING OUT THE PLAN

There is a certain minimum requirement in all studies to which all pupils are held.

While the pupils who need all the assigned time to complete a particular study are engaged upon such study, the more capable pupils "are, by process of natural selection, detaching themselves temporarily from the class in order to work on some study in which they are weak, or for broader or deeper study of some topic by means of reference books, gathering illustrative material, or following out some line of interest approved by the teacher." (In North Denver each room was provided with a carefully-selected reference library of from fifty to seventy-five volumes).

Those pupils who have been excused from the recitation may at any time be called back to the recitation to help in the clearing up of some point for the other pupils, being in this way at all times held responsible for the work that is being done. In case such a pupil fails to respond at any time either in advance or review work, such failure is held as indicative of the fact that he has not attained such a degree of efficiency in the minimum requirement as to permit of a continuance of his release from the regular class work; this release is therefore canceled. Such experiences tend to stimulate the pupil to make his mastery of the subject more permanent, not for the day only. In this way the pupil's judgment is developed.

"A pupil may at any given time find the minimum in arithmetic or geography all that he can do while at the same time he is making a fuller study than some of the rest, of a period in history." For this privilege he is willing to work more energetically in the subjects in which he is less able. It is easy to see that here there is an opportunity for the school to foster in a systematic way the bent of individual pupils.

Individual pupils may be called upon from time to time to give the results of their extra reading or research to the class. In this way may be cultivated the desire for social service. The pupil gives the results of his work to the class. He is making himself socially useful. "His success awakens a desire in others to be able to make creditable contributions of the same kind; thus all are stimulated to do independent work in spare moments and to find spare moments for independent work. They learn how to find things in books. This is perhaps the most useful accomplishment that we can cultivate in a child. Books must always be his chief reliance after leaving school."

Characteristics of the Plan

It is not a rapid transit plan for hurrying pupils over the course of study.

The class is ready "with an even front" to attack each new lesson.

The new lesson is first developed with the class as a whole.

One pupil does not travel faster than another, but he may get more. The road is wide as well as long. "It is not so much to the pupil's advantage to go through the grades rapidly as to get all that he is capable of getting while he is going through."

"The plan tends to even up the pupil in the various studies, since making pleasant excursions in favorite studies is conditioned upon fair attainment in all studies."

The additional study time makes less home work necessary.

The teacher has more time to devote to the less able pupils without injury to the others.

It tends to develop the latent powers of the pupils.

It gives the teacher an opportunity to judge of the fitness of individual pupils for promotion to the next higher class.

It thus gives opportunity for really able pupils to be promoted whenever they show the requisite ability.

In a class that is well graded every pupil will find some study from which he may be released now and then. The plan is thus a source of encouragement to all. It stimulates steady growth in the pupils. The motives held out of spending one's time profitably, of increasing one's store of knowledge, of being socially useful, and of gaining the power of self-mastery, are of the greatest value.

The plan demands of the teacher more thought and a somewhat broader preparation than the old plan. But there is compensation for the extra expenditure. The "active spirits" in the room are kept profitably employed with self-imposed tasks. The spirit of work thus gained solves nearly all problems of discipline. The plan requires that the pupils be given more freedom than is customary but, as Van Sickle points out, the seeming perfect order of the old-time school room with everybody sitting up straight, no whispering, no moving about is not indicative of a good school if every thing is done on the initiative of the teacher.

Below are some of the results as shown by the work for one year:

"In the eighth-grade class this year, 4 have finished, or will have finished, the eight-year course in less than six years, 7 in six and one-half years, 21 in seven years, and 24 in seven and one-half years. Able pupils are not kept marking time, but are advanced whenever they show the requisite strength. The half-year interval does not prevent this. The year interval would add materially to the difficulty.

In the two buildings in which this plan of class management has been systematically tried there has been apparently greater attention to individual needs than in the other buildings. One hundred and sixty-one pupils finish the work of the eighth grade this year in three buildings. In one building, 57½% finish in eight years or less; in another, 62½%, and in the third, the one pursuing the ordinary plan, only 37½%."

This would seem to indicate that the plan tends to conserve the interests of individual pupils. There are many points of excellence in the plan that can be used under any system of classification.

The greatest difficulty that the writer has experienced in getting teachers to apply the main principles of the plan to their work lies in the fact that they have been trained in the normal school to think that all pupils must be engaged upon the same task at the same time. They cannot see that there can be class unity without class uniformity. The principles of the North Denver plan tend to do away with class uniformity and to promote class unity. Under it the ambitious pupil is given an opportunity to add to his spiritual wealth and while so doing to cultivate initiative and responsibility, powers that the modern school is charged with failing to develop.

The Group System, which will be described in the next chapter, is in reality only a modification and extension of the fundamental idea of the North Denver plan.

THE GROUP SYSTEM

The Group System of teaching has been given more or less attention by school men and has attained success in the schools of New York City. According to one writer the Group System has certain points of resemblance to the Elizabeth and to the Batavia plan. It is asserted that while in no sense is it the plan of the old ungraded school yet it does apply to the modern all that is good in the ungraded school plan. It provides a different rate of progress for children of different abilities. It succeeds according to certain of its advocates by placing emphasis on the old-fashioned drill by translating the hum drum of this drill into independent study. The aim is to cover the work assigned in such a manner that every child has a chance to do the work well. The essential aim is not the rapid advancement of the bright pupils, although by its use a bright child may advance as rapidly as he can cover the work with thoroughness. Its real merit lies in the fact that it enables the slow and backward pupil to keep up with his grade.

The plan may be carried out in two ways: on the basis of the Constant Group or on the basis of the Shifting Group.

Under the Constant Group the pupils of the class are formally divided into groups to be maintained for a definite period. The promotions from group to group occur only at stated times. The pupils are classified according to their ability to advance. There are usually two or three groups. This method of grouping requires divisions in nearly all the subjects of the course of study and the pupils in the most advanced group may pass to a higher grade, although they may be unprepared in certain subjects.

Under the Shifting Group, the children are divided according to their power really to grasp a new point. "Thus the teacher may have as many groups as she deems advisable in as many subjects as she chooses. The pupils may not be grouped in all subjects nor is the membership of the groups constant. Pupils may be promoted from group to group any time. There may be two groups in reading for example, and three in arithmetic or language. Occasionally bright pupils may be promoted to a higher grade but this is not the main aim of the Shifting Group. The aim is to make the bright child do thorough, careful, work and to bring the slow child up to the grade standard while the aim of the Constant Group is to advance the bright child as rapidly as possible.

The advantages of the Constant Group may be summed up as follows:

1. It is economical. The bright pupil goes along from grade to grade as fast as he is able, thus making room in the lower grades for the admission of new pupils, thus lessening the demand for more rooms and more teachers.

2. The bright pupil, not being compelled to mark time will retain a greater interest in his work.

3. Standards of scholarship will thus be improved and the membership in the higher grades will be increased.

4. Because of the small groups the teacher will be able to reach individually those pupils who are weak in one subject and thus enable such pupils to advance with their grade.

Certain disadvantages are mentioned:

1. Rushing children through the grades tends to superficiality and lack of thoroughness and is likely to undermine the health of nervous ambitious pupils.

2. The formality of the Constant Group tends to cause the teacher to lose personal touch with the pupils.

3. Acquirement of a certain amount of knowledge is made the standard of advance and undue stress is likely to be placed on tests and examinations.

4. The dull and slow children are likely to be misunderstood and neglected.

The advantages claimed for the Shifting Group are as follows:

1. No child is slighted or neglected. The bright child does thorough work and is kept up to the mark by reviews and drills.

2. He learns how to study and has time to form habits of study.

3. Children in the slow group are given more time for instruction and thus brought up to grade, and pass with their brighter fellows to the next higher class, although they may not have covered as much ground in all subjects.

4. Every child receives personal attention and instruction from the teacher.

5. Since this does not require grouping in all subjects, certain branches may be taught to the class as a whole, thus retaining the advantages of having the class recite together. The studies for grouping are usually reading, arithmetic and grammar.

The method of carrying out the Group System is somewhat as follows:

1. The new lesson is presented to the class as a whole. A short test following the lessons reveals such pupils as have not mastered the new points and so need further instruction.

2. At the next recitation only those pupils are called to the class who failed to grasp the points at the previous lesson. The others, whom we may call Group A, remain at their seats to do extensive study. Those who have been called to the recitation, whom we may call Group B, again go over the lesson of the previous day, attacking it from a new point of view. A test at the end of this period will probably reveal a small number of pupils from this group who have as yet failed to grasp the essential points of the lesson.

3. This group, called Group C, will come to the recitation for a third period of study on the lesson, while Group B will be assigned study work similar to that assigned Group A, on the previous day, and the latter group will be given new work.

4. After the pupils in Group C have grasped the work the class is reassembled and another section of new material is presented to the class as a whole.

According to one writer, the main objection to the plan is the difficulty in arranging for real or study work. Unless such work is carefully planned for and is carefully supervised it tends to foster habits of slovenliness and idleness. Rightly planned for and supervised it cultivates that most valuable of all habits, the power of independent work.

The Charlottenburg Plan

Charlottenburg, the largest suburb of Berlin, has lately reorganized its school system to make it better meet the needs of the children. The school officials have come to the conclusion that a rigid course of study, which all the children are required to pursue, while it may meet the needs of the children in the smaller cities and towns, is not adapted to the needs of the children of a great city, whose mental and physical endowments are the result of such varied influences in both the home and in society at large. They have sought to meet these conditions by adjusting the school organization to the abilities of the children.

The six-year-old children, who are unable to meet the demands of the regular school classes, are placed in small preparatory classes of 24 pupils each and given instruction that partakes largely of the nature of the kindergarten.

Regular instruction for the abler children who begin school work is given in classes of not over 45 pupils each.

Those children who cover the course in this class are promoted to Class Six, the lowest regular class of the six-grade course; those pupils who fail are given the opportunity of entering a class only a half-year below in point of progress.

For the backward pupils the course is so arranged that on finishing the *Grund-klasse* they enter Class Six B. The course for the B classes is divided into half-year sections, thus making promotion or demotion easy. The membership of the B classes is limited to thirty. These B classes correspond to the furthering classes of the Mannheim system. They are separate from the special auxiliary schools which are for children with mental defects.

By means of the selective process in these B classes it is easy to determine the children who need the aid of the auxiliary schools. The Charlottenburg plan makes it possible to individualize instruction at every step of the course and to treat the child according to his ability and his present needs.

As can be readily seen, the Charlottenburg plan is not different in its essentials from many of the plans which have been worked out in our own schools.

The two important features of the plan are the special provisions for private help for such children as are failing in their studies, three hours a week being devoted to this work; and second, readjustment of the course of study by diminishing the amount of abstract memory work and placing greater stress on the concrete things in the child's environment, on drawing and allied work.

The Mannheim System

In Berlin, from 1896 to 1899, only about 61% of the children reached the highest classes of the *Volksschule;* in Charlottenburg, from 1890 to 1900, some 50% of the pupils left school, having covered only a part of the elementary school course. In other city systems of Germany the conditions were still worse. In Mannheim during the last two decades of the last century only about a fourth of all pupils were being carried through the highest grade.

These failures were attributed to overcrowded classes, to over-difficult courses of study, to child labor, to absence, and to frequent changing from school to school. These reasons did not constitute the chief cause in the minds of many school officials; among them was Dr. Sickinger, superintendent of the schools of Mannheim. He attributed the failures to the fact that the school did not take account of the differences in the learning ability of the children. The children in the schools were being treated as if they all had the same powers of mind, hence, the failure of large numbers to profit by the instruction offered.

The Mannheim system of school organization was established in 1899 and is an attempt to remedy the difficulties pointed out above, by adapting the organization of the schools to the needs of individuals.

The Mannheim plan consists of a system of special classes running parallel to the regular classes of the *Volksschule.* In these special classes or "furthering classes" as they are called, are placed those pupils who, for one reason or another, show themselves too weak or too slow to do the work of the regular classes. Such pupils are grouped into classes that form six grades running parallel to the six regular grades. These classes are organized on the same plan as the regular classes and do much the same work, although less extensive. It has been found, however, that a special course of study should be arranged for these six grades.

It would appear from the accounts of the Mannheim system that have been written in English that there is a constant interchange of pupils between the regular classes and the "furthering classes." This is not the actual condition of things in Mannheim.

During the year 1907-8, out of 2354 pupils enrolled in the "furthering classes," only seven gained extraordinary promotions within the school year to a higher grade of the regular classes, and only seven to a higher grade of the "furthering classes." At the end of the year only 123 pupils from these classes were promoted to higher grades of the regular classes. 1741 were promoted to "furthering classes" of a higher grade, 103 to a "furthering class" of the same grade; 18 were sent to the auxiliary classes and 359 withdrawn from school.

It is clear that the "furthering classes" are almost exclusively for a special class of children who have little hope of gaining the regular classes, only 5.2% of the number enrolled being able to accomplish this end.

In commenting on these figures Dr. Sickinger writes in his yearly report for 1908 as follows: "These results are a confirmation of the view previously presented of the character and object of the 'furthering classes.' The deficiency which is peculiar to the pupils in the 'furthering classes,' shows itself chiefly, not as a gap which has arisen through conditions of neglect in the course of instruction but as lack of ability inherent in the nature of the children." "The capacity of the children for school work," according to Dr. Sickinger, "is in consequence of physiological, psychological, pathological and sociological conditions so variable that it is impossible, as promotion statistics show, to carry forward on a level through the same course of study and within the compulsory school age, from six to fourteen, all children obliged by law to attend the folk-schools."

On this conception the differentiation which characterizes the Mannheim organization is built up.

The pupils are separated, according to their individual endowments, into three groups. The mentally defective, who under ordinary conditions must be sent out from the lower grades as illiterates are assigned to the auxiliary schools which represent in their organization the first four grades of school work; next, the normally endowed children who are expected each year to be capable of gaining a promotion, are assigned to the regular classes of the regular eight-grade course; then those children, who while not abnormal, still are classed as below the average, are placed in the so-called "furthering classes." These classes are the main feature of the Mannheim system. Instead of being carried along with the regular classes about 10% of the children enrolled in the folk-schools are segregated and taught in these "furthering classes," numbering not more than 38 pupils each. Not all German school men are in favor of the Mannheim system. The chief argument against it seems to be that so much extra machinery is not necessary to give the best results both to the bright pupils and also the backward.

Pretzel, writing in the Die Deutsche Schule, makes a strong point of the fact that the gifted pupils are needed in the classes to spur on the backward by their example.

A writer in the Pädagogische Zeitung of August, 1906, criticises both the Mannheim and the Charlottenburg plans. He says that the fault in the system of schools lies in a too difficult course of study which is causing an overtension of the powers of all the children, quick as well as slow. The remedy for this is not a division of pupils into classes according to their mental ability as has been done in Mannheim and Charlottenburg, but a simplification of the course of study so that all but the very few can accomplish it. For these few a second year in a grade will not be a detriment but a benefit. The "furthering schools" are to him unnecessary. "Where," he asks, "is the division of pupils into mental groups to stop? In Mannheim are the three divisions, but Charlottenburg has gone a step further and established a fourfold division. The very bright at the top, then the normal, then the backward and finally those who must be taught in the auxiliary school." The criticism closes with the admonition that among all these charitable arrangements in the school system the normal child must not be lost sight of.

Promotion Classes For Gifted Pupils

Democracy should not keep talent in the quarantine of mediocrity. Thus the discovery and fostering of talent and the setting it to work in the interests of society should be one of the main aims of education in a republic. Society is just beginning to see that equality before the law must not be confused with natural equality. This confusion has doubtless led to some delay in society's concern for the highest development of its human resources. In the old form of caste education, the son could not rise above the station of his father. The fear that a differentiated education would develop caste has, doubtless, led many to assume that in a democracy all should be educated alike. This fear is well founded if the development of superior powers leads, in general, to a drain upon society in the way of wasteful luxury, inordinate pleasure-seeking, and immoral example, evidenced by a degenerate, ease-loving progeny. But democratic society is coming more and more to see that this following of false ideals of life by some of its members is due to its own failure to provide proper educational opportunities for all its children. The people's schools have all along been cheap schools, far too cheap to be educationally efficient. This fact has led Dr. C. W. Elliot to assert that American schools can never do their work well until the people make some approach to paying for public education what many parents are now willing to pay for the private education of their children. Dr. John Dewey never said a wiser thing than this: "What the best and wisest parent wants for the education of his child that should the community want for all its children." Some writers and speakers, more prominent than wise, are forever dinning our ears with statements concerning the vast sums the nation is expending for education, which in the aggregate seems amazingly large, nearly $400,000,000 for 18,000,000 children; an expenditure, however, when looked at from the individual side of less than twelve cents a day per pupil. Almost no American community spends twenty-five cents a day per pupil for education; yet even the moderate-priced private schools charge at least a dollar a day per pupil for tuition alone.

Public schools can be made better than the best private schools for a reasonable expenditure, but to be reasonable it must be much greater than the present expenditure for school purposes. In many places school officials are kept in office because they can manage the schools on a small expenditure of money, not because they can make the schools more efficient.

Why should it be a matter of surprise for a man of means to send his sons and daughters to the public schools? The reason why public education often gets such scant attention at the hands of legislators, both state and national, is because the leaders in such bodies often have little real personal interest in public education because their own children are in private schools. Witness the penurious policy of Congress toward the National Bureau of Education in its recent attitude toward appropriating some $75,000 for establishing special lines of educational research.

Society can never suffer from the evils of the caste system if it is willing to provide proper education, not cheap education, for all its children, to the extent of conserving and developing human power wherever found. Under this scheme normal, subnormal and supernormal members of the community will each be provided with educational opportunity, and encouraged and aided to develop up to the full extent of individual ability.

Our educational scheme has been organized to fit the average normal child. Until very recently it had never occurred to educators to differentiate the educational scheme to fit different degrees of mental endowment.

In speaking of the establishment of special schools in

America, a German writer in Die Hilfschule states, that their development has been slow because their establishment was thought to violate the democratic ideal of human equality. This ideal has had to give way before the advance of scientific knowledge, especially in the realm of the psychology of the feeble-minded. It is now generally accepted that these mentally weak members of the human family can never by any human means become normal men and women. They can, however, by specially organized schools with a special curriculum and specially trained teachers be vastly improved in their mental, moral, and physical condition, and to a greater or less degree made self-supporting, and by proper supervision made less a menace to society.

Society has of late years given a great deal of study to the subnormal or feeble-minded child, although much remains to be done even here. No doubt much will be done in the next few years in the line of investigating the pathological causes of mental retardation in normal children.

Lugaro[1] points out that "Investigation into subjects in whom the mental deficiency is very slight, into the so-called deficient or backward children, would be of especial interest because they already present from the clinical and psychological sides many differentiating signs which in all probability are dependent on extremely diverse pathological processes." We may thus some day discover the neural causes of backwardness.

On the other hand almost nothing has been done to investigate psychologically or in any other manner the possession of superior mental endowment by certain children.

We do not know how many such children there are in the average community. We do know that about 1% of the children of school age in a given community are so feeble-minded as to need special schools, that from 7 to 10% more (Goddard says 15%) are so backward as to need supplementary teaching in the way of individual help either by special individual teachers (Batavia Plan), by Parallel Classes (Mannheim System), or in the ungraded room (Adjustment Class). We do not know, however, of the 85 to 90% of the school children who remain, how many are gifted with superior mental powers to such a degree that instruction should be differentiated for them.

Dr. T. G. Bonser[2] thinks that "perhaps the worst type of retardation in the schools is withholding appropriate promotion from those pupils who are the most gifted, therefore of the most significance as social capital." This statement is made as a result of a study of the reasoning ability of children of the fourth, fifth, and sixth grades. Dr. Bonser found that many children of the fourth grade had mental powers superior to many children in the sixth grade, yet the graded system made no provision for the adequate development of these powers.

---

[1] Modern Problems in Psychiatry, p. 234.

[2] The Reasoning Ability of Children of the Fourth, Fifth and Sixth School Grade. Teachers College, 1910.

Dr. G. M. Whipple of Cornell, it is reported, will soon open a clinic to be especially devoted to the study of the supernormal child. In commenting on the fact, Dr. J. E. Wallin [1] makes the assertion that the supernormal child has been most neglected of all, due, he thinks, to the fact that the children on the plus side of the efficiency curve are not so numerous as those who constitute the retarded group, and to the fact that they do not trig the wheels of the school machine. "But the supernormal, or precocious child, is the incipient genius."

Dr. H. H. Goddard[2] in his recent study of some 2000 school children of a certain school system is authority for the statement that about 4% of the children in the public schools possess mental power so superior to the average child as to demand special opportunities in the way of special classes and courses of study for its development. For ascertaining the degree of mental ability or mental age the Binet-Simon tests were used. Children whose mental age was more than two years above their chronological age were considered as possessing mental power sufficient to entitle them to be designated as "gifted." It is to be doubted, however, whether a child who exhibits power to answer the questions three years above his mental level could thereby be considered so gifted as to require special educational advantages without further tests. The child's previous environmental conditions may have played an important part in giving him knowledge sufficient to answer many of the Binet-Simon questions.

The suggestions of Meumann[3] along the line of determining the degree of mental endowment (Begabung) by finding the relation between practice and ability to execute, by establishing norms of performance by which we may measure marked general or special ability in individual cases and by ascertaining the degree of spontaneity that characterizes certain activities and what is closely related, the natural impulse to certain kinds of work, will doubtless result sometime in standards of direct use to schools.

---

[1] See article, Clinical Psychology and the Psycho-Clinicist, p. 123 *Journal of Educational Psychology*, March, 1911.

[2] See article Two Thousand Children Measured by Binet Measuring Scale of Intelligence, *Ped. Sem.* June 1911, p. 236.

[3] See Vorlesungen Vol. II, pp. 375-6.

Dr. William Stern of Breslau says in a recent article that society cannot afford to neglect the supernormal or gifted children. He does not mean by the supernormal the genius in the sense of Galton and Baldwin, but the child "that possesses in quantitatively superior forms capacities that are generally exhibited by individuals at large." According to Stern there are two types of gifted children, the specifically, and the universally supernormal. To the first type belong children who are exceptionally gifted in any one line such as music, mathematics, drawing, or painting, the technical arts, or in the learning of languages; to the second type belong children who seem to be endowed with superior mental powers in all lines of activity. "Those who belong to this group are the great intellects."

Stern cites the investigation which Kerschensteiner carried out on some 50,000 Munich school children to discover those who had marked artistic ability. The children were asked "to make free-hand drawings of specified objects, both from memory and from nature." In this way were discovered some children, in most cases the children of poor parents, who showed remarkable talent, that had in the majority of cases not been properly appraised by the school. Kerschensteiner saw to it that these children were assigned to art schools or arts and crafts schools where they would have the opportunity to develop these latent powers. "But," observes Dr. Stern, "what would have become of these children had not Kerschensteiner chanced to make his experiment? And how much similar talent may smoulder unrecognized in other places where no one thinks of making such tests?"

Stern protests against the practice of prematurely developing children who show marks of talent. These "child prodigy monstrosities" are "often prematurely developed gems of human talent," a sacrifice to the "avarice and passion for fame of deluded parents." "Quiet, harmonious, general development," should be the lot of all children.

J. Petzoldt in a pamphlet entitled, Sonderschulen für hervorragend Befähigte,[1] advocated the establishment of special schools for the exceptionally gifted. He also, according to Stern, suggests that in a large city like Berlin, the twenty most gifted pupils from Quinta (the second-year class in the Gymnasium) (age ten to eleven years), should be sought each year and placed in a special class. "If," says Stern,

---

[1] Teubner, Leipsic, 1905.

"suitable teachers are found for such classes and schools, and if they are not made too large their achievement may be quite extraordinary."

Groszmann[1] classifies exceptionally gifted children as pathological and non-pathological. The latter type may, as a rule, he says, be permitted to progress in school at their own rate, but there are special times, e. g., certain growth periods, such as puberty, when certain nervous tensions may develop, so that the physical health of such pupils needs careful watching. Under the pathologically gifted, Groszmann includes "the genius, the Wunderkind, and the idiot-savant." A real genius is a Wunderkind grown up. Leonardo Da Vinci was a genius of the general type; Mozart of the particular type. Mozart was clearly a pathological genius. Dr. Groszmann thinks that the following remark of young William James Sidis, the eleven-year-old prodigy who is said to lecture to Harvard professors on the fourth dimension, indicates that he is warped somewhat in his mental make-up. "He remarked one day: 'I wonder whether school children in future generations will celebrate this as a holiday because it was the day on which I began the study of the physical sciences'"(!)

Barr[2] intimates that "backwardness and precocity in early childhood are indicative of an abnormal ego."

Dr. G. E. Shuttleworth would appear not to favor the attempt to develop the gifted, for he thinks that a marked departure from the normal in one generation in the ascending direction is but too apt to be compensated for by a corresponding deviation downward in the next, or at any rate, in succeeding generations. Nature dearly loves an average.

Galton[3] thinks that the real genius is bound to rise in spite of all obstacles. He says that the best care that a master can take of a genius is to leave him alone.

Hirsch[4] and Baldwin[5] both state that the influence of education upon genius may be important. Says Baldwin, "Many a genius owes the redemption of his intellectual gifts to legitimate social uses, to the victory gained by a teacher and the discipline learned through obedience. And thus it is, also, that so many who in early life give promise of great distinction fail to achieve it. They run off after a phantom, and society pronounces them mad."

---

[1] See article The Exceptionally Bright Child, Proceedings Groszmann School. 10th Anniversary, pp. 103-112.

[2] Mental Defectives, p. 125.

[3] Genius and Heredity, p. 34.

[4] Genius and Degeneration, p. 167.

[5] Social and Ethical Interpretations, p. 162.

PROVISIONS FOR GIFTED PUPILS IN GERMANY, FRANCE AND ENGLAND

The Realschule and the Gymnasium, which the German boy enters at nine years of age and in which an annual tuition fee of about $25 is charged; the lycee, which takes the French boy at ten or eleven and in which he lives, the annual charge being from $80 to $200; the great English boarding schools, which also receive their pupils at about ten and charge for tuition and board about $1,000 a year, are founded on the principle that a certain proportion of a nation's youth needs special educational advantages. These schools provide an opportunity, especially in Germany, for pupils with special gifts to make an earlier differentiation in their educational choices than is possible in the more democratic American schools. This doubtless leads to more scholarly foundations, and to a more efficient training in preparation for certain lines of professional work; this is especially true in the learning of languages. A boy of ten stands the monotony of the drill incident thereto much better and masters the difficulties of pronunciation much easier than does the boy of fourteen, the age at which the average American boy begins such work in the high school.

The German Volksschule has been said by some to lead into a blind alley, but provision is being made in some of these schools, notably those of Charlottenburg and Mannheim, for giving the abler pupils an opportunity to get an education commensurate with their powers. Ziegler[1] puts much emphasis on the right of the child to become something better than the father and different from him. He also says that the upper ranks of society need the new life and fresh blood from the lower social ranks to keep them from degenerating. On the other hand, Ziegler thinks that the schools should be so administered that the rank of the father should not be the means of gaining for the son a cultural or professional education when the abilities of the latter have marked him for an education in some trade. He says: "To advise that the son of Mr. Uppermost or Mr. President of the Government Board become a skillful watchmaker or cabinet-maker would (by the father) be regarded as a downright insult, as it was when I advised a father to allow his son to become a gardener." Yet the good of society demands that this be done in order to avoid producing a "cultured proletariat."

---

[1] See his Allegemeine Pädagogik, Teubner, Berlin 1905, p. 13.

Provision for the Gifted Pupils Under the Mannheim System

For many years the pupils of the Volksschule in Mannheim[1] have had the option of receiving French instruction three afternoons a week after regular school hours from 4:15 to 5:15 o'clock. There were certain objections to this plan, the chief one was the fatigued condition of the children after the long school day. This led the school authorities to do away with French instruction out of school hours and to arrange for special parallel divisions in the upper grades of the free Volksschule, for such pupils as had shown themselves fitted for the extra study by their industry and the quality of their work, especially in language, and whose parents desired them to take up the extra language. Those pupils were chiefly considered who intended to go into commercial work and would later attend the commercial continuation school where instruction in French is given.

The basal idea of the Mannheim system is the "adaptation of the means of education to the educability of the individual pupils." This new arrangement for meeting the needs of the more gifted pupils is in line with this idea.

The plan went into effect in the spring of 1909 and is carried out according to the following regulations:

1. The curriculum of the classes in a foreign language of the Volksschule is, including the number of hours per week, exactly the same as that for grades VI-VIII of the Bürgerschule.

2. Pupils composing these classes are chosen from the VI-VII and VIII grades of the *Volksschulen* of the entire city, including the suburbs, and receive their instruction in school houses centrally located in the Altstadt.

3. A one-year language course with four hours of instruction weekly, given out of school time (after four o'clock in the afternoon) must be taken by all fifth-grade pupils who wish to enter upon the work of the regular foreign language classes. These preliminary courses are given at the regular schools, the pupils taking such courses being members of the regular classes.

4. Such pupils of the fourth grade as have been regularly promoted and have received good reports throughout may be assigned to this preliminary course at the close of the fourth year.

5. At the close of this one-year preliminary course such

---

[1] See Mannheim Jahresbericht der Städtischen Schulen 1908-9, p. 21-22.

pupils as have made good progress in French and are also above criticism in the other subjects studied, in the matter of attainment, industry, and conduct are admitted to the regular foreign language classes.

6. Pupils whose work in the foreign-language classes does not come up to the standard are sent back to the regular classes.

Schools for Gifted Pupils in Baltimore, Maryland

Pupils who have done superior work in the sixth grades (with the sanction of their parents) are permitted to pursue additional subjects of high school grade while engaged upon the regular work of the seventh and eighth grades.

The studies generally taken are Advanced English, German, and Latin; in a few cases pupils have been permitted to take some of the first-year Mathematics.

Pupils selected for this work attend a school so located that enough pupils may be brought together to make it feasible to carry on departmental instruction. One such school was started in Baltimore in 1902 with 173 seventh and eighth-grade pupils. There were in March, 1910, four such schools in Baltimore, enrolling 571 pupils of the two upper grades. Selected pupils are allowed to remain in these schools for an extra year, thus being able to complete their high school work in two years. The great majority of pupils from these classes graduate from the high school in three years, their work in the preparatory classes saving them a year in their high school course.

Supt. Van Sickle writes thus of the practical working of the plan:

"By June, 1910, 236 (preparatory pupils) in all will have graduated. Of these, 41 were in the high school proper but two years; 120 were in high school three years and 75 four years. While these 75 pupils who, in the early days of the plan spent four years in the high school did not save any time, they enjoyed marked advantages. They earned 13,050 credits or an average of 174 each; whereas the number required for graduation was only 150." The high school records of these selected pupils, both as to honors taken and as to ability to cover the course in less than the required time, show that the preparatory work has been of value to them.

"The fact," says Van Sickle,[1] "that teaching can not be economically provided for less than three classes makes it necessary to organize the preparatory classes in selected centers."

---

[1] Gifted Children in the Public Schools, The Elementary School Teacher. April, 1910, pp. 357-366.

Obstacles to the plan:

Parents do not understand it.

Some teachers are not in sympathy with it because it takes away their able pupils.

Only about a third of the pupils selected as eligible for the preparatory school actually go because of reluctance to go to a strange school.

Plans similar to that in Baltimore are in use in Boston at the Latin School; in Providence, R. I., at the Hope Street High School; at Portsmouth, New Hampshire; at Richmond, La Porte, Crawfordsville, Goshen, Madison, Indiana; at Joliet and Aurora, Illinois; at East Saginaw, Iron Mountain, Kalamazoo, and Grand Rapids, Michigan; at York and Lincoln, Nebraska; at Lead, South Dakota; at McAlister, Oklahoma; at New Orleans, Louisiana; and at Lake George and Warrensburg, New York.

These plans[1] practically carry out what is known as the "six and six plan"; six years of elementary school work and six years of high school work.

THE CLASS VERSUS THE CLASS-INDIVIDUAL PLAN OF INSTRUCTION

Opinions of Superintendents and Principals

Within the past few months I have sent to many of the leading superintendents and normal school principals in every state to gain first-hand information as to what was being done in the way of training teachers to recognize and meet the needs of individual children; and second, to find out what was actually being done, and also what ought to be done in the school-room in this direction. The results of these returns are to be considered more at length in another section of my study.

One question asked of both Normal School principals and superintendents was this: "Are you fully satisfied with the all class method of school instruction and if not, how would you modify it to meet the needs of slow and backward or other needy individual pupils?"

Of the 54 superintendents and normal school principals who answered this question 45 expressed themselves as not satisfied with the all-class method. One expressed himself as fully satisfied with the method, while eight gave answers that could not be interpreted either for or against. It will be interesting to read several of the answers as they will form a sort of introduction to the discussion of several plans of individual instruction.

---

[1] See article on Preacademic School, in Report of the Committee on School Organization to New York City Teachers Association, New York, 1910.

"I do not approve the all-class method. A part of the time of the teacher should be given to individual instruction."

"I believe that in every school from half an hour to an hour per day should be devoted to work with individuals and that this hour should be during school hours."

"I am not satisfied with the all class method and am not using it but a part of the time."

"I would suggest that the pupils be given more time for independent study, during which time the regular teacher should work with the slow and backward pupils, asking such questions and offering such suggestions as will stimulate them to their best effort."

"No, give individual attention to such pupils as need it which includes most of every school."

"The class method of instruction has its obvious limitations. I should not want to abandon the class work, but supplement it with individual instruction."

"I know of no more well developed plan than the Batavia one. But suspect by a more thorough study by a larger number of experts still better results may be reached."

"I suppose the ideal way in which to attack this problem is to work for smaller classes. If this is not practical, then a special teacher to each group of six or eight classes may be the next best thing. Otherwise, in a closely crowded system of large schools each under a single teacher, I believe the best plan to be an unequal division of the class into two sections so that each of the slower pupils may receive a larger measure of the teacher's time than would otherwise be the case."

"I would not modify the class recitation. It is, properly conducted, the best educational instrument the teacher has. Individual pupils should have the teacher's attention outside of recitation."

"No, I like an adaptation of the Batavia system."

"A bit of personal experience may be in part an answer to the question and it may interest you. In 1896 the school committee of Waltham made arrangement with the Normal School at Framingham by which students who had finished their junior year might become assistants in different schools in the city whose need was greatest, to work with backward children. They were paid twenty-five dollars a month. Besides these workers we had an unassigned teacher of ability in the two large grammar schools whose work was with backward children and in doing substitute work in case of absence of any regular teacher. This plan was very successful in reducing the non-promoted children from a yearly average of about 20% to one of five to seven per cent. But in this work we never lost sight of what Dr. Harris and Dr. White call the 'community interest,' of the class as a whole. We need the 'community interest and not factional or group interests.'"

"The all class method is not satisfactory or adequate. This is coming to be universally conceded. We are setting apart periods for individual work. I should judge there might be some merit in the New York City plan of grouping."

"Every teacher should use every effort to help the unfortunate even if it takes much extra time. I have not been able to devise a panacea for a recognized evil."

"If classes could be made small, not over thirty pupils to the teacher, and ungraded classes could be formed whenever necessary, for deficient children I should be fairly satisfied I think that backward children should have a measure of individual help but any scheme which devotes a disproportionate amount of effort to the dull pupil in an effort to make him accomplish as much as the brighter member of the class is both futile and dangerous."

"I am fully satisfied with class methods. There is no 'the class method' for there are several. A class method that really develops a method in which the teachers' aim in any given subject is to separate the subject into its elements, to arrange these elements in logical order, and then to bring the class face to face with these elements one after the other in this proper sequence and in proper time, is the quickest and surest means of reaching the so-called backward, or slow child."

It is thus evident that probably a large majority of school men are in favor of, and earnestly seeking for, some plan of meeting the needs of the individual children. The opinion last read expressing approval of the all-class plan was rather the prevalent one ten years ago. It is encouraging to know that the trend of opinion is in the opposite direction.

We shall next consider three plans of school instruction that have placed great emphasis on individual instruction: first, the Pueblo plan; second, the plan in use in Newton, Massachusetts; and last, the Batavia system of class-individual instruction. The Pueblo, or Search plan, makes instruction almost wholly individual and is in a way a return to the old unguarded school; the Newton plan has retained many of the good features of the Pueblo and eliminated many of the questionable ones; while the Batavia plan is more systematic than either of the other two in that it assigns a definite amount of time on the daily program which is to be devoted to individual instruction and presents a rather definite technique which such instruction is to follow.

Plans of Instruction for Reaching the Individual Pupil

The Pueblo Plan

The Pueblo or Individual Plan of instruction was developed by Mr. Preston I. Search while superintendent of Schools in Pueblo, Colorado.

The plan is essentially a return to the individual organization of the school which prevailed for centuries until La Salle late in the seventeenth century discovered the value of class instruction. Indeed the individual method existed in Scotland as late as 1886 in some of the very best schools.

Under this plan each pupil is a class going ahead as fast as he is able or thinks he is able. The teacher hears every pupil recite that portion of the work that he has been able to prepare. The Pueblo plan was applied in both the high and elementary schools. The working day in the high school was divided into six periods each one hour long. One regular period each day was given to physical training in the gymnasium, while on alternate days another period was devoted to manual work. This arrangement allowed 4½ hours each day in which to do the work in the regular high school studies. To quote from Mr. Search, "Three periods a day are definitely assigned to the three literary studies carried on together; the additional 1½ hours is regarded as extra to be spent wherever the pupil needs it most, or in some cases according to his individual bent. In the lower classes the assignment of this extra time is left to the teacher; in the two higher classes it is left to the student. In the high school the work is conducted by departments and hence a field program is followed. In grades below the high school, the work is entirely by flexible programs, excepting as certain studies are arranged so as to systematize the time of certain teachers. The studies do not always come in the same order and hence all studies can share in the advantages of the stronger hours of the day. The time is not apportioned by rule, but is left entirely to the judgment of teacher. The working periods are longer than is usual elsewhere. In the primary grades the methods are largely those of the kindergarten. Indeed, it may be added that the entire plan of the school finds its keynote in the application of the principles of the kindergarten to every department of school work."

The class recitation as ordinarily conducted was abolished because it reflected on the honesty of the pupils' preparation and because it wasted so much of the pupils' time. The school was transformed into a sort of laboratory; the office of the teacher was to pass from desk to desk, inspiring, directing and correcting each pupil at his work. The recitation and examination are wholly individual and each pupil, to use the words of Mr. Search, "actually and absolutely recites every chapter and line of his Latin, every section of his other studies, and passes his examination in the most thorough manner." The class exercise is used by the teacher at the beginning of a working period for presenting new principles and for giving general directions.

In the elementary schools the plan is somewhat different. The work of a given class is concerned with some subject, as percentage. Some of the pupils will do a minimum amount of work, while others will accomplish much that is supplemental. There are no fixed methods; each teacher is allowed to attack the work in her own way. The subjects of the course of study are so arranged that those of each succeeding grade are anticipated in such a manner in the preceding that to pass from the working section of one grade to that of the next higher is not difficult. The flexibility makes promotions from grade to grade an easy matter.

"The plan," according to Superintendent Search, "is intended to care better for the so-called 'backward' pupils. The system of grading that compels the pupil who is behind his class to drop out of school, is not right. Somewhere along the line there must be a place for every pupil, be his advancement or progress what it may. Teachers are instructed to provide carefully for the discouraged pupil and to give more time to the lower half of the school, remembering that the bright ones may always be cared for by supplemental or advanced assignment of work." The advantages and results of the plan, as summarized by Supt. Search, are as follows:

"1. Better health.

"The pupils do their work in school; the other hours of the day are devoted to recreation and the relaxation that comes from change of work.

"2. It results in making trained, independent, self-reliant workers. The pupils have definite work to do, a definite time to do it, and they work under the direction of trained teachers and they are obliged to render an accurate account of the work done. Such work tends to beget self-reliance and independence. Each pupil stands or falls on his own merits. The work is all done at school, no parental help and no helping by fellow pupils.

"3. There is more work accomplished and it is more thoroughly done.

"4. There is more enthusiasm in the work. The dull and listless recitation with the time consumed listening to dull and poorly prepared pupils is done away with. Each pupil realizes that he has a chance to do his best and to advance according to his ability, hampered in no way. He develops a love of work and is filled with the enthusiasm that results from real accomplishment.

"5. There is less discouragement. Every boy and every girl has a place in the school and a chance to do his or her best. There is no such thing as failure to be promoted. Each pupil is promoted each day.

"6. There is more opportunity for additional and outside work. There is time for pupils to read good books, attend lectures, and to do many other things outside of school that are as much a part of education as school work itself.

" Individual work of the kind mentioned calls for strong teachers, teachers who are more than lesson-hearers, who are masters of their subjects, and ready to point the way to the pupil at any stage of his progress."

We have discussed the individual plan somewhat in detail because school men in general have been somewhat disposed to ridicule it. The plan, however, as worked out by Supt. Search has so many points of excellence that it is worthy of serious study.

That in seeking to obviate the defect of the graded school, Supt. Search was led to slight certain well-established points of excellence in the class-method of instruction and organization, cannot be doubted.

Individual Work at Newton, Massachusetts

We find in the school system of Newton, Massachusetts, the nearest approach to a realization of the ideals for which Search rightly contends in his book, " The Ideal School." Of course, individual teaching is not carried to the extreme which makes it destructive of what there is good in class work, but the individual child is made the focusing point of the whole school system and toward the middle point the teaching power is directed. The work at Newton, under Dr. F. E. Spaulding, is based on the thesis that " such a modification of the rigid system of gradation and promotion is necessary as will make it possible—nay necessary—for each pupil to work as hard, as actively, and as independently, and to advance as rapidly as his sound and well-balanced development requires. It means, equally, a modification which will insure that no pupil be dragged suddenly and kept perpetually beyond his depth in the ocean of knowledge, but that each one, by his own actual efforts, build a stable foundation on which he can advance and rise securely, if ever so slowly."

The plan of reaching the individual is made effective by the employment of unassigned teachers.

The unassigned teacher has no regular class. Her work is supplementary to the class work of several teachers.

"The day's work of an unassigned teacher may be something like this. For the first half-hour in the morning there comes to her room a little group of a half-dozen children from a third grade. The third-grade teacher has selected these children because they are all having difficulty, beyond that experienced by their classmates, with some process in arithmetic, perhaps it is multiplication or division. The unassigned teacher has previously been informed as fully as possible concerning the condition and needs of these children. The half-hour is spent in discovering still more accurately the peculiar difficulties of each one, and in giving each just the assistance and practice which he requires. This work is individual so far as need be; at the same time the group can usually work together advantageously.

"At the end of the half-hour these children return to their class, and a group of children come from the seventh grade; perhaps there are only four in this group. They are not having unusual difficulty with any subject. Quite the contrary; they need more work and more difficult work than their class as a whole is capable of. Yet they are not fitted to pass at once successfully into the class next above theirs. The unassigned teacher prepares them for this long advance step. She takes them through the essentials which separate the work of their present class from that of the class which they are preparing to enter. To-day, and perhaps for several days, the work is in arithmetic. Other days it will be history, or geography, or grammar.

"When the period is over, these children give place to a group from a fourth grade. The members of this group are neither having unusual difficulties nor are they capable of more than their classmates. They are temporarily behind the work of their class. There has been an epidemic of measles in their room and they have been kept out for several weeks on account of illness or exposure. The unassigned teacher's work with these will be similar in purpose to that with the last group; she will take them rapidly over the essentials covered by the class during their enforced absence.

"The unassigned teacher's fourth period is occupied with a full division, perhaps twenty pupils, of children of the fifth grade. They come from a large class composed of two grades, the fourth and the fifth. To relieve the regular teacher of some of her many recitations, the unassigned teacher takes the work in arithmetic with the fifth-grade division.

"The fifth period is devoted to a single child. He does not belong to any grade, judged by the evidences of ability which he shows when assigned any definite task. So he probably comes from a class in which he is not too conspicuous on account of his size. The unassigned teacher tries patiently to determine just what the serious obstacles in the child's advancement are. He may have to be sent to a special class for backward children. Possibly, with sufficient individual attention, he can work into some regular class."

Thus the work of the unassigned teacher goes on throughout the periods of the school day. Sometimes she works with pupils who are trying to gain a grade, more often with those who are behind in their work and need special aid to catch up with the class, or again, she works with individual children whose peculiarities of mental endowment place them out of adjustment with regular school work.

In Newton there are also unassigned teachers in the high school.

The great drawback to this kind of work is the difficulty in securing experienced teachers who are fitted for this special work. The ordinary teacher by training and experience is so thoroughly embued with the idea of class teaching that it is hard for her to realize the significance of individual teaching.

The work in Newton is done by the most promising graduates of the normal schools, who, according to Supt. Spaulding, take up the work much more readily than do experienced teachers.

This would seem to suggest a fault in our present methods of training teachers, in that they are given no abiding conception of what individual teaching means. It also suggests a fault in our present system of school organization which is usually so ordered that the teacher comes into contact with the class mind to such an extent that she forgets the individual units and does not possess the ability to reach these lesser units.

At Newton the endeavor has been to eradicate from the minds of teachers and principals the idea that every pupil must begin the work of a grade in the fall and complete it the following spring, and that every pupil who fails must repeat the work of the grade where the failure occurred.

The fact has also been emphasized that real promotion is not a thing which takes place at stated periods but that it is continuous from day to day, if the work of the school is properly individualized.

Promotion is by subjects rather than by grades. The range of variation among the different pupils of a class in the different subjects may be several months. In no case is it more than a year. Frequently the same teacher has charge of a class for two years, while often it is found advantageous to transfer individuals or groups from one teacher to another. The fundamental idea of the whole system is the best good of the individual, not his rapid passing through a number of grades. "Better grasp of subject-matter, better training in independent thinking may mean slower advancement for one pupil than for another."

Yet when the pupils and the parents understand that honest and independent work is what counts and that the school is so ordered that individual achievement is made possible at every point in the course, it is safe to say that as much progress will be made by all pupils as under the plan of rigid promotion and that the progress of the majority, so far as real education is concerned, will be vastly increased. Thus it is seen that at Newton there is no uniform plan of organizing a class for individual work. "Such a plan," according to Supt. Spaulding, "would defeat the very purpose of this work. In some subjects the pupils work, in constantly changing groups, there being two, three, and sometimes even four groups within a class in some particular subject. Individuals are ministered to according to their needs but the individual works alone only until he can be classified with some group."

Class-work occasionally takes the nature of explanations and discussions on new topics, more frequently the nature of class drills on mechanical work; or again, topics which have been studied by the class-members individually may be taken up in review by the class. The problem work is largely individual, each pupil depending on his own efforts and solving as many as he can.

As a means of advancing from a lower to a higher group, a pupil may do the work of both groups in certain sequential subjects.

The actual working out of this plan is described by principal Charlton D. Miller of the Hyde School District in Newton:

"1. One class, a combination of first and second grade pupils, is composed of fifteen of the most promising pupils of a large first grade in September and the B, or lower section, of the second grade. In all probability, most of the first grade class will enter on third grade work during the early part of the next school year.

"2. In the fourth grade, a group of seven will probably reach the sixth grade in June or early autumn. The plan for accomplishing this is simple and the work not unreasonably hard for the teacher. Arithmetic requires no extra time on the part of the teacher, as the pupils work ahead individually during the regular period for that subject. Language admits practically of the same handling. In reading and geography there are separate divisions.

"3. A group of six pupils from the A section of the sixth grade, working under special provision, will, doubtless, complete the work of grades six and seven and take up eighth grade work soon after, if not at the opening of school in September.

"The entire class is considerably in advance of the grade work. Seventh grade geography will be completed by all members of the class.

"With the arithmetic taken care of by the individual classification, only history and grammar remain to be planned for specially, which is easily accomplished by the teacher without any outside work.

"Grammar is given on alternate days; and the lessons being correspondingly longer, the ground can be covered. Advanced history is given while the rest of the class do language work.

"4. Seven pupils from the A section of the seventh grade are working for an early promotion to grade nine. There is every indication that this will be accomplished in time for the completion of ninth grade work by the end of the next school year.

"Here again the work will be conducted by the teacher in regular school hours, with the exception of geography which is being taught by the special assistant. These pupils have nearly completed seventh grade work in some subjects, and are working in separate divisions in history, geography, and grammar, preparing and reciting on alternate days. History and geography may not be entirely completed by June; and, in that case, study continues during the summer or early autumn, and examinations are taken.

"5. There have been the following cases of recent, individual promotions.

"A pupil has been promoted from the A section of the second grade to grade three, because of conspicuous ability as shown in class work, with evident capacity for advanced work.

"Two pupils have received a promotion from the fourth grade to the B section of the fifth grade because of the same conditions.

"Another typical promotion of this kind was that of a boy from the A section of the fifth grade to the A section of the sixth grade. In a case of this kind, there is some sixth grade geography to be made up. This is directed by the teacher who promotes the pupil."

The Batavia Plan

Class-Individual Instruction

Class-individual instruction, better known as the Batavia System, had its origin in the town of Batavia, N. Y. The history of this origin is very interesting. There was an overcrowded room of some sixty pupils in one of the Batavia schools. By a fortunate suggestion on the part of Superintendent John Kennedy it was decided to relieve the congestion by putting an additional teacher into the room instead of taking a class out. This teacher was Miss Lucie Hamilton and to her rare personality and superior teaching power is due largely the initial success of class-individual instruction.

Miss Hamilton was not an assistant to the room teacher. Her rank was coördinate but her work was entirely different. It was to be wholly with those pupils who for one reason or another were behind their class. She was to work with these pupils individually until they were able to work with the other members of the class. She was to work with the laggards until they were able to work with the leaders. From this individual teacher, class-individual instruction took its rise. For the first time in the history of education a teacher had been assigned to deal with backward pupils in a humane way. Up to this time they had been neglected or else classed by themselves in rooms for backward pupils and with the spur that comes from an aggregation of dulness they were supposed to succeed. Now they were to be kept with their fellows and given the opportunity to succeed. . And they did succeed. After a few months of class-individual instruction, it was evident that a marked change had taken place in the first of two-teacher rooms. Pupils who had been considered very dull began to improve, and some of them were soon up among the leaders. There was only one way to explain the really marvelous change. The reason lay in the work of the teacher, who hour after hour, and day after day, had called the retarded and backward pupils to her side to find the difficulties, and to encourage them to overcome these difficulties.

There was a change not only in the working ability of the pupils, there was a change in their attitude as well. The whole atmosphere of the room was changed. All were happily at work. There were no bright pupils with nothing to do, and no dull pupils who could do nothing. The standard of work was gauged by what the ablest pupil could do, and all the pupils were soon well up to the standard.

So the good work went on in that room, and then the test came. Would the plan get similar results in other overcrowded rooms? Additional teachers were placed in other overcrowded rooms, and the results were as good as those of the original two-teacher room. It was thus shown that the success of the plan was not due to the personality or ability of a specially gifted teacher.

The success of the plan was so great that the superintendent and school officials began to think that the two-teacher room, with the combination of class and individual instruction, was the only solution of the problem of the dull and backward child. But after the two-teacher plan had been in successful operation for a year, it dawned upon Superintendent Kennedy that success was due not to the two teachers but to the two kinds of teaching. It was the happy blending of individual with class instruction that was obtaining the results. So after thinking the matter out very carefully, he announced to the teachers of the regular grade rooms that they also were to give individual instruction. He tells us that they looked astonished and asked how it was to be done. His answer was that half the school time was to be taken for individual instruction and half for class instruction. Some of the teachers doubted; some protested, saying they could only get the pupils along by giving all the time to class work and to expect the work to be done by devoting one-half the time to the dullards was simply preposterous.

"Well," said the superintendent, "the only way to tell is to try it. We have the old school plant intact. We have torn nothing down; and if the new plan proves a failure it will be an easy matter to go back to the old way. All I ask is that you give the new plan a thorough trial."

And they did—and no teacher went back to the old plan, and no teacher has ever wanted to go back. In this way the Batavian System had its birth. Its success in the single-teacher rooms was as marked as that in the two-teacher rooms. It met with like success in the rooms where one teacher taught two grades, and it has met with success in schools where the teacher has many grades.

Briefly, then, class-individual instruction is a systematic plan for helping slow and backward pupils to help themselves. We know that it has wonderful power to open the minds and hearts of children, both large and small, and cause them to unfold and grow. Col. Parker has said that the best results of the Quincy idea was a more humane treatment of little children. The best result of class-individual instruction is a more humane treatment of all children, large as well as small. We have been sacrificing millions of our children to the machinery of the graded school system. We have been trying to mechanize education. Class-individual instruction seeks to humanize this mechanism. It is only sympathy and common sense combined. For years we have been writing and talking about the individual child but we have been doing very little for him. Class-individual instruction does something for the individual child.

The idea of the system is really very beautiful. Here is an intelligent, sympathetic teacher, studying her flock to find the needy ones. She calls these needy ones to her side, one after another, and talks with them, and encourages them, points out their difficulties, and leads them to master these difficulties. She points the way,—she leads, they work and gain the power. The thing most needed in our schools is systematic, sympathetic individual help as an aid to class instruction. The plan we are considering gives this systematic, sympathetic, individual help.

What has the plan done for the children of Batavia?

It has given them the spirit of work and the power to work. The spirit of work is everywhere in all rooms. The pupils, all of them, attack difficulties with confidence and self-reliance.

You know there is a saying that "he who can is king." The children of Batavia *can*, they have power; they can do things; they are kings of their work. They attack diffities without shrinking or cringing; and they master things usually. In case they are not able to master a difficulty, there is someone ready to point the way to mastery. The individual teacher is a leader rather than a helper. She has travelled the road and knows the way. She says to the pupil, "This way, follow me." The pupil follows but does the climbing himself; there is no boosting by the teacher.

The person who thinks that individual instruction means doing the work for the pupil misses the point entirely. The teacher works with the pupil, not for him. She gives him sympathy in his difficulties, but she never becomes so sentimental as to do his work for him. She encourages him by telling him that the difficulties he is meeting are such as all who have traveled the road of knowledge have met and mastered and they are such as he may master if he will put forth the effort. The successful teacher under the class-individual instruction plan is a sympathetic, patient, courageous leader and as such she develops sympathy, patience and courage in her pupils.

The late Professor Hinsdale, in his excellent book, "The Art of Study," tells us that nowhere in this country is the art of study adequately taught. He then tells us that children must learn to study by studying under intelligent direction. The intelligent direction is the teacher's work. It means directing in the right way, time, and place. Teaching is causing the pupils to learn through intelligent direction. The pupil must do the work, do the studying himself. The pupils at Batavia know how to study and they study. They work and are happy. They have time for study and they use that for study. The great cry all along the line is, that children do not know how to study. How can they know if we do not give them the opportunity to learn? Direct them intelligently, give them something definite to study and then hold them responsible for the work assigned and you will find the children will develop the power to study.

The fault with most teachers is that they help either too little or too much. In one case the result is discouragement; in the other it is loss of power. To let a pupil wrestle with difficulties that he cannot master, is bad; to help him over difficulties that he can master with proper direction, is perhaps worse. Individual instruction aims to teach the pupil how to study by giving him something definite to study, with proper direction in case of need.

The children at Batavia have the power of independent work. There was no deception on the part of the pupil, no trying to tell something that the pupil did not know was right, in the hope that it might happen to be right. This habit of bluffing is perhaps the worst trait possessed by school children to-day. It is the attempt to get credit for something that is not the pupil's own possession. It is the direct result of the present system of class teaching, when the teacher is a tester and not a true teacher; where it is a disgrace to confess ignorance and to say, "I don't know." If a pupil in Batavia does not know a thing, he says so frankly, and is either told to look it up, or at the next individual period he is taught what he did not know. There is no premium placed on superficial word repetition. There is no attempt to deceive the teacher; such an attempt would fail because the teacher knows her pupil. Her work is teaching not testing. She tests, of course; but she tests that she may teach; she does not teach that she may test. There is a great difference between the two kinds of work. The pupils are working for knowledge and power, not for a high per cent. on report cards. If the plan did nothing more than eliminate deception from class recitation it would be a great blessing.

Some of the chief merits of class-individual instruction are its provision daily for a definite amount of individual instruction and its insistence that this time be given to those pupils who are most in need.

It also lays stress on the fact that instruction is to be given at the point of greatest need rather than on the daily lesson. This is one of the main principles of efficient individual teaching, yet it is the one that it is hardest to get teachers to apply. Real individual teaching goes back, back until it reaches solid ground and there it begins to build.

The plan also provides the supervised study-period. The plan has been criticised because it devotes too much time to the backward pupils. It does devote a large share of the time to the backward pupils because they are the most needy but in case the bright pupil shows that he needs individual instruction he receives his share.

Opinions of Teachers on Individual Instruction

It is interesting to read what teachers who have used individual instruction systematically in the school room for a period of several years say as to the relation between pupil and teacher brought about by its use. Here are some bits of testimony from teachers of Westerly, R. I., where individual instruction is a regular part of the daily work. A department teacher of the seventh and eighth grade writes:

"The strongest argument that I know of in favor of individual work is the opportunity it gives the teacher to win the confidence and understand the personality of the pupil. Especially is this true in departmental work, where, as in my case, there are upwards of one hundred thirty dispositions with which to deal."

Another seventh-grade teacher writes:

"There is closer sympathy between teacher and pupils. The pupil is reached in a way that no other method reaches him."

A fifth-grade teacher:

"Teacher and pupil understand each other better, are drawn closer by questioning, and oftentimes a study once looked upon as a bugbear becomes one of pleasure and much profit."

A departmental teacher in geography and science:

"I have observed a much more perfect understanding of pupil by teacher and vice-versa. Many cases of discipline have been most pleasantly adjusted through the use of this period. Many unpleasant happenings have been avoided by a timely talk, a suggestion given, or the case at hand clearly put before the pupil. When the way is clearly pointed out many follow carefully. In the case of new pupils, I have reached many through individual periods, have had them interested and reciting well in a short time, whereas I would not have established an acquaintance so soon had it not been for the individual periods. This is especially noticable in the case of children who are timid, who come from other schools, or from environments quite different from that of an average pupil."

A fourth-grade teacher:

"There is no doubt about individual instruction bringing pupil and teacher into closer relations. It broadens the sympathies of the teacher for the pupil. By it, the real difficulties and problems of the child are discovered. I have found children failing from poor sight or hearing, some whose minds were distracted from their work by regularly frequenting the "cheap show," and some who were purely lazy and needed to feel the pressure of compulsory work. I do feel that the opportunity that individual instruction gives me to know my children is very valuable. The personal contact with the teacher should and does mean much to the pupil."

Third and fourth grade:

"As a result of this work there is a pleasant atmosphere in the room. Pupils do not become discouraged. They know they will be cheerfully helped. The teacher is able to know the pupils better, and pointing out his weak points to him while he is near her at the desk is more graciously received than if done in the presence of the whole class. I have never had a pupil who did not accept the individual help in the right spirit."

Mixed room:

"I think as a result of the individual system, the teacher and pupils become better acquainted with each other. There is a closer sympathy and a better understanding. The teacher sees more clearly the obstacles the child has to encounter, and the child learns to think of his teacher as a friend who will help him."

First grade:

"I think that the pupil and teacher are brought more closely in touch with each other by this system than by any other. I would not have missed the close relationship for a great deal."

These bits of testimony are chosen at random from a considerable number. They represent fairly well the testimony of almost all the teachers who have used individual instruction for any length of time.

In presenting these views no claim is made as to the superiority of the Batavia System over many other plans. It has, however, the one advantage of being systematic. Under it the work is done daily. It is based also on certain definite principles which must to a large extent be common to all plans of individual work, that are effective, which if carried out intelligently cannot fail to win success.

Suggestions for a Plan

A plan approaching the ideal would be a synthesis of the excellent features from many of the plans that have been presented. The work would be based on what might be called a course of study in the fundamentals: this work would be so graded as to be within the powers of all normal children, both quick and slow. To it would be added a course in optional topics to be studied by the abler pupils largely by themselves, in order to develop initiative and self-direction. A record of such work would be made in the pupil's personal record book which should accompany him through the grades.

Beginning, perhaps, at the sixth grade the work would be somewhat differentiated without in the least breaking up the class organization.

For two hours a week on alternate afternoons, as in Switzerland, certain of the pupils would take work in a foreign language while the rest of the pupils could take hand work. The aim would be to keep the classes small, not more than thirty pupils in each of the two lower grades and not more than thirty-five in the other grades. In order to get the number of pupils in the two lower grades, large classes of forty to sixty pupils would be divided, one-half coming in the morning, the other half in the afternoon.

This plan of half-day sessions for the two lower grades has been carried out with success for years in several places. The first grade and perhaps the second would be divided into two divisions of ten or fifteen pupils each. This would reduce the seat work and its supervision to a minimum. Often in the second grade and in all the grades above, the class would recite and study as a whole and during the study periods the teacher would help individual pupils, usually singly, sometimes in groups of two or three, but rarely more, The chief feature of the plan would be the supervisor of individual work. This teacher would be in charge of the work of four or six rooms. In her hands, would be the school welfare of all the individual pupils in these four or six rooms, but she would care especially for the abler pupils and also for the slow and backward. She would spend an hour or more every day in each of the rooms under her charge, teaching needy pupils whether quick or slow. When an abler pupil had been promoted out, of course she would see that he was adjusted to the work of the new grade. She would also look after pupils coming from other schools to see that they did not lose time by their change. Accompanying the pupils, as she would through a series of years she would come to know each pupil's peculiarities and be able to protect him from the injury that so often comes from a change of teachers. This teacher would, furthermore, have special knowledge of mental defects and be able to advise with teachers and parents, in regard to children with such defects. She would combine with her other work that of the friendly visitor, and thus bring the school and the home into closer coöperation.

Such a teacher could work under almost any plan of grading. The plan of having such a teacher has been anticipated in a way in many places with this difference, the individual teacher has often been a woman of little experience both in teaching and in life. What is wanted is a woman of maturity—a real school mother, who has a cosy corner in her heart for every child, who is imbued with the missionary spirit, and is bound to have every boy and girl under her charge have a fair chance.

With our schools so organized as to grading, following in the main this fundamental course of study, with both the class teacher and the individual supervisor doing individual teaching, and what is still better, personal work, both inside and outside of school (and with the really defective pupils in auxiliary schools), there would be little need of such separation of pupils as that at Mannheim, and there would be the best chance for every pupil to become a self-respecting, successful American citizen, one who could look the world in the face and say, " I am the master of my soul."

BIBLIOGRAPHY

AYERS, L. P. Laggards in Our Schools, Charities Publication Committee, New York, 1909. 236 p.

BARNES, HAROLD. The Group System of Teaching. Unpublished Study.

BRAHN, MAX. Die Trennung der Schüler nach ihrer Leistungsfähigkeit. *Zeitschrift für Schulgesundheitspflege.* Hamburg 1897. No. 7 and 8, pp. 385-398.

BURK, C. F. Promotion of Bright and Slow Children. *Educational Review,* 1900. Vol. 19, pp. 296-302.

Explaining the method of grading used in Santa Barbara, California, 1898-99.

CHASE, LYDIA GARDNER. Public School Classes for Mentally Deficient Children. *Charities and Corrections,* 1904, pp. 390-401.

Historical account of the development of public school classes for the mentally deficient in the United States and in foreign countries.

COLLAR AND CROOK. School Management and Methods of Instruction. Macmillan and Co., New York, 1905, p. 336.

DEUCHLER. Uber das Mannheimer Schulsystem. *Zeitschrift für Pädagogische Psychologie, Pathologie und Hygiene,* 1908-9. Vol. 10, No. 6. pp. 384-421.

Contains an excellent account of the Mannheim System.

EDSON, ANDREW W. Group Teaching in the Elementary Grades (in Report of Proceedings of 63d Annual Meeting, New York State Teachers Association). *Education Department Bulletin,* No. 457, pp. 307-311.

Contains suggestive programs for carrying out work.

———. Special Plans for the Promotion of Backward Pupils. *Kindergarten Magazine,* 1906-7. Vol. 19, pp. 397-403.

ENDERLIN, M. Zur Mannheimer Schule Reform. *Die Deutsche Schule,* 1905. Vol. 9, pp. 137-149; pp. 201-215.

———. Die Neuorganisation der Volksschule in Mannheim. *Die Deutsche Schule,* 1904. Vol. 8, pp. 24-37; pp. 86-100.

FINDLAY, J. J. Principles of Class Teaching. Macmillan, London, 1902. 442 p.

GARBER, JOHN P. A Rational System of Classification and Promotion in Elementary Schools. *Education,* 1907. Vol. 27, pp. 288-302.

HARRIS, WILLIAM T. Class Intervals in Graded Schools. *N. E. A. Proceedings,* 1900, pp. 332-340.

HUTTON, THOMAS B. Classification and Gradation. *School Review,* 1908. Vol. 16, pp. 543-550.

An application of the so-called Cambridge plan to all the grades.

Jahresbericht über den Stand der dem Volksschulrektorat unterstellten Städtischen Schulen in Mannheim in Schuljahr, 1908-09. Mannheim, 1909, p. 86.

JONES, OLIVE M. Teaching Children to Study. The Group System Applied. New York, 1909.

Contains a full account of the Mannheim Special Class System.

JONES, W. FRANKLIN. Study of Grading and Promotion. *Psychological Clinic,* May and June, 1911. pp. 63-96; 99-120.

KLAMER, C. S. Die zurückgebliebenen Kinder in der Volksschule. Vortrag, Heft 77 der *Pädagogischen Abhandlungen.* A. Helmich Bielefeld.

Contains suggestions for dealing with the less gifted by arrangements within the classes. Opposes the Mannheim System.

LANDON, J. School Organization. London, 1889. 117 p.

LANGE, K. Die Schwachen in der Schule. *Pädagogische Studien,* 1901. Vol. 22.

Opposes the Mannheim System.

MAHONY, JOHN J. The Problem of the Poor Pupil. *Education,* 1908. Vol. 28: 197-212.

Treats the problem of the backward child and the failure of the schools to reach him.

PRETZEL, C. L. A. Gegen die Mannheimer Schulorganisation. *Die Deutsche Schule,* 1904. Vol. 8, pp. 603-618.

PRINCE, J. T. School Administration. Syracuse, 1906.

RICHMAN, J. A Successful Experiment in Promoting Pupils. *Educational Review,* 1899. Vol. 18, pp. 23-29.

RICHMAN, JULIA. Special Classes and Special Schools for Delinquent and Backward Children. *Charities and Corrections,* 1907. 232 p.

RIGLER, F. Principles of Classification in the Thirty-sixth Annual Report of the Public Schools of Portland, Oregon, 1909, pp. 107-113.

SEARCH, P. W. The Pueblo Plan. *Educational Review,* 1894. Vol. 7, pp. 154-170.

WINCH, W. H. Notes on German Schools. London, 1904. 264 p.

WINZER. Die Mannheimer Schulorganization. *Zeitschrift für Philosophie und Pädagogik,* 1906. Vol. 13, pp. 355-363.

Report of Dr. Sickinger's lectures before the Summer School at Jena, 1905. Very good presentations.

YOUNG, ELLA FLAGG. Grading and Classification. *N. E. A. Proceedings,* 1893. pp. 83-86.

For further information on classification, retardation and elimination of pupils, and the formation of special schools and classes, see Volumes of Proceedings of National Educational Association, and Volumes of the "Psy. Clinic" especially.

TRAINING TEACHERS TO GRADE

By A. G. STEELE, A. M., Fellow in Psychology and Education, Clark University

The question of grading or marking of pupils has attracted much attention recently, and under present conditions, it is likely to receive still greater attention and study.

According to these marks pupils are passed or failed, are given or refused opportunity to continue a study once begun or to enter another in which that study is prerequisite; according to these marks honors, prizes and scholarships of large value are awarded each year. According to them school officials and many other employers select their employees. According to them parents mete out praise or blame to their children, and even fellow students and associates often give or withold social recognition of several different kinds. According to them the pupil is permitted or advised to select this or that vocation. A mark given to a pupil is not a private matter between him and his teacher, but is far reaching in its influence upon the pupil's life. His whole destiny may be changed and even perverted by a single wrong mark. It is not enough that the mark given to a pupil shall satisfy his ambition and the teacher's conscience. It should be rightly interpreted by all who may give him advice or opportunity which may affect his choice of a vocation; and besides, it should not be wrongly interpreted by those who are in a position to offer sympathy, hope and cheer to his life.

School grades, carefully given, might be of considerable assistance in vocational guidance. As matters now stand they are often worthless or misleading. A pupil may develop and grow and learn something from a teacher who uses the poorest methods of instruction and discipline. Seeing her errors, he may learn to avoid them. But if she gives him a high mark in a subject in which he can do but moderately or even poorly, she may influence him to select a vocation to which he is ill adapted and in which he must either fail or not accomplish half of what he might have done in another. This would entail great loss, both to the pupil and to the community, and no one should rise and call such a teacher " blessed." If on the other hand she mark a pupil much too low, she does him an injustice of which any teacher should be thoroughly ashamed. Such a mark might not only deter the pupil from entering the vocation in which he could render greatest service, but it might cut off many opportunities for promotion in that or any other field.

How then shall we learn to give marks which shall be rightly interpreted by as many as possible of those who need to interpret them?

This problem has already been attacked from several different view points and much light has been thrown upon it. First we might mention the fact that experimental psychologists seemed to find that the distribution of any mental trait or ability among a large group of people is such that there are many more who have that ability in moderate degree than in a very low or very high degree; that mental abilities are distributed among pupils approximately according to the curve of the probability integral. Then Prof. W. S. Hall reached the conclusion that school grades should be distributed approximately according to the probability curve. Impressed with the truth of this conclusion, Max Meyer made a further study of the distribution of grades, in which he found it most satisfactory to divide the surface of distribution of the probability curve into five parts corresponding to five grades. If we designate these by the letters A, B, C, D, and E, in which A represents the highest grade, we should have, according to his results, 3% of A's, 22% of B's, 50% of C's, 22% of D's, and 3% of E's. He then finds that one department in the University of Missouri had, during the five years preceding his study given about 55% of A's, while another had given only about 1% of A's. He expresses the conviction also that conditions are as bad in other schools, and this has since been verified by the studies of Foster and others.

Dr. Meyer then suggests that we see that each instructor of 100 pupils or more make his marks conform roughly to this form of distribution, and accordingly the University of Missouri and the University of Iowa and probably a few other institutions have adopted this plan and have revolutionized the grading in those institutions.

But this wave of reform has left the large majority of our Universities and Colleges, as well as our Normal Schools, high schools and graded schools, untouched. The large majority of teachers from kindergarten to university still give marks according to their own personal tendencies rather than according to any scientific principles of how grades should be distributed or any thought of how they will be interpreted by others. They seem to feel that a pupil's mark is entirely a personal matter between him and his teacher, and that, so long as the better students get the better marks, all is well.

But a moment's consideration of the uses to which grades are actually put and of the fact that the number of uses made of them is on the increase, will show that, if we are to give marks other than merely "passed" or "not passed," they should be given upon some equitable and scientific basis, so that they may be rightly interpreted by those who need to interpret them:

If schools would confine themselves to the judgment "Passed" or "Failed," their sins of commission would be greatly reduced, but there are many who feel that their sins of omission would be multiplied in much greater ratio. Such a plan might easily be better than blundering attempts at fine distinctions, but could hardly be equal to the best judgments which really do discriminate with something approaching scientific accuracy, especially if these more distinctive grades may be of great service to employers, as President Crabtree's studies indicate, or to vocational advisers as others have suggested. In any case, very few schools attempt to follow the plan of giving only "Passed" or "Not Passed" and I know of none which follow it consistently; so that the plan seems to be in no immediate danger of general adoption by our schools.

Distribution according to the probability curve would likely do much to make our grades more intelligible; but with small classes this is often difficult or undesirable or both, and it is not very consoling to a teacher to feel that she must wait several years and accumulate a large number of marks before she is able to test their distribution and see just what marks she ought to assign to the few students whom she is called upon to mark here and now.

Can we offer our teachers any other guide to the giving of marks, which shall be rightly interpreted by the greatest possible number, which will enable them to give such marks at once and to a few?

Teachers and examiners of all kinds are often confronted with just such emergencies. To hope to tell them just how to meet every such case would seem a Utopian dream, but it may be possible to offer some suggestions which may be of service in guiding to the giving of right marks, after they have secured the necessary data. Such is the aim of the following experiment.

In three small classes of the more advanced students of education at Miami University during the past summer, we assumed that the mark a teacher gives on any work is an index of how she would interpret grades given under similar conditions; and we further assumed that the average of a number of marks on the same answers by different teachers is more reliable than the mark given by any one of the teachers, and more nearly what would be rightly interpreted by the greatest number.

Accordingly, I prepared a list of ten or twenty questions (all different and covering the lectures and text we had completed), for each pupil of the class. While I asked these questions orally and each student in his turn answered his list orally, all the other members of the class graded his answers, and each assigned him a mark on the scale of 100 (the system they were required to use). The grades thus assigned to each by each together with the average given to each and by each are given in the three following tables.

In these tables the columns marked 1, 2, 3, etc., contain the grades given by the separate members of the classes to the other members, while the rows marked 1, 2, 3, etc., contain the marks given to the separate members of the class by the others.

The first column to the right of the double line contains the average grade assigned to each member of the class; the second, the average deviation of all the marks assigned to each; the third, the widest deviation of any two judgments on any one person; the fourth contains the average CORRECTED according to the principles explained below.

The first row below the double line contains the average grade given by each member of the class; the second contains the average deviation of the grades given by each from the average given to each; the third contains the weights assigned to the judgments of the separate examiners, varying invedsely as the average deviation of their respective judgments from the average of the judgments of the class. For instance, in Table I, the average of all the A. D.'s in the 2nd row below the double line is 5.2. If we assume that the judgment of any one whose A. D. is 5.2 shall have a weight of 1 and those whose A D.'s are greater than this average shall have a weight of less than 1, we obtain a series of ratios as follows: 5.2:4, 5.2:2.1, 5.2:3.6, etc., which, when reduced to decimal form give the weights found in row 3 below the double line.

TABLE I

Grades given:												
	by 1	by 2	by 3	by 4	by 5	by 6	by 7	by 8	Av's to	A.D's on	Ex D's on	Wt'd Av's
to 1		98	99	100	94	80	98	98	95.3	4.9	20	96.2
to 2	88		92	82	90	93	92	85	89.1	3.3	11	89
to 3	87	89		abs	95	84	89	87	88.5	2.5	11	88.5
to 4	88	86	90		80	91	93	89	88.1	3	13	88
to 5	88	82	85	89		88	92	69	84.7	5.1	23	85
to 6	75	76	67	abs	89		81	57	74	8.1	32	74.3
to 7	68	73	76	61	81	86		61	72.3	7.7	25	72.3
to 8	37	50	49	54	63	53	69		53.6	7.3	32	51.7
Av's by	76	81	80	77	84	82	88	78	80.7	5.3	21	80.6
A.D's by	4	2.1	3.6	5.4	7	6.4	5.7	7.7	5.2			
Wt's of	1.3	2.5	1.44	.96	.74	.81	.91	.67	sum 9.33			
Dr. Story's Wt's	.0635	.5394	.1724	.0648	.0393	.0408	.0515	.0281				

TABLE II

Grades given:										
	by 1	by 2	by 3	by 4	by 5	by 6	Av's to	A.D's on	Ex D's	Wt'd Av's
to 1		88	97	92	96	85	91.6	4	12	91
to 2	89		73	81	92	88	85.4	6	19	84.1
to 3	85	78		76	94	80	82.6	5.6	18	80.7
to 4	81	75	71		95	85	81.4	6.8	24	80.1
to 5	73	62	55	61		80	66.2	8.2	25	65.8
to 6	45	54	53	56	70		55.6	6	25	54.2
Av's by	75	71	70	73	90	84	77.1	6.1	20.5	76
A. D's by	4.8	4.2	7.4	3.2	10	6.2	6			
Wt's of	1.25	1.43	.81	1.88	.6	.97	6.94			
Range of Grades by	44	34	44	36	26	8				
M. V's of Gr's by	9.4	10	12.4	12.2	5.8	2.6				
Medians	81	75	71	76	94	85				

TABLE III

Grades given:												
	by 1	by 2	by 3	by 4	by 5	by 6	by 7	by 8	Av's to	A.D's on	Ex D's on	Wt'd Av's
to 1		90	95	91	98	92	96	96	94	2.6	8	94.1
to 2	92		91	89	95	86	92	90	90.7	2	9	90.5
to 3	94	75		87	73	84	95	87	85	6.6	22	85.8
to 4	85	68	75		96	88	88	92	84.6	7.7	28	83.5
to 5	86	80	78	86		74	96	74	82	6.3	22	81.7
to 6	85	69	80	72	91		90	74	80.3	7.3	22	79.8
to 7	90	68	77	72	91	70		88	79.4	8.9	23	79.3
to 8	84	65	72	59	70	80	88		74	8.6	29	74
Av's by	88	74	81	79	88	82	92	86	83.8	6.3	20.4	83.6
A. D's by	5.7	9.1	2.7	6	8.3	5.1	7.9	5	av 6.2			
Wt's of	1.1	.68	2.3	1.03	.75	1.2	.78	1.24	sum 9.08			
Range of Grades by	10	25	23	32	28	22	8	22				
M. V. of Gr. by	2.6	6.4	6	9.1	7.8	6	3	6.3				
Median by	86	69	78	86	91	84	92	88				

By multiplying each grade given by the weight of the judgment of the examiner giving it and dividing by the sum of the weights thus used, we obtain the weighted averages of column 4 to the right of the double line.

Professor W. E. Story of this University, who has taken great interest in this problem, has worked out the weights for Table I by the more laborious but more exact method of weighting the judgments of the separate examiners inversely as the mean square of their deviations from the average given to each instead of inversely as their average deviations, as I have done. The weights he obtains are found in the fourth row below the line in Table I.

By comparing the weighted averages with the plain averages we notice that the differences are but slight; that all the averages place the applicants in exactly the same relative position. Hence, the average judgment of several competent judges gives approximately the true grade, and the one which will be more nearly rightly interpreted by the greatest number of such judges. All the work of computing the weighted averages might, therefore, be omitted without great error. But a glance at the first row of figures below the double line in each table shows that the separate examiners vary widely in the average grade given by each. Most of these examiners show a strong personal equation both in the central tendency and in the distribution of the grades assigned. For instance, in Table I Examiner No. 1 gives an average grade of 76, while No. 7 gives an average grade of 88. In Table II Examiner No. 3 gives an average grade of 70, while No. 5 gives an average grade of 90. In Table III No. 2 gives an average grade of 74, and No. 7 an average of 92.

Again if we compare No. 4 and No. 7 in Table III as to distribution of grades we find that the grades given by No. 4 range from 91 to 59 (a difference of 32), while those given by No. 7 range from 96 to 88 (a difference of only 8). Expressing their tendencies to distribute grades in terms of the mean variation of the grades they gave, we have 9.1, and 3, respectively, as is shown in the second row below the heavy line.

The three rows below the heavy line in Tables II and III, are intended to show the peculiarities in the distribution of the grades given by the separate examiners. The first of these merely shows the range of grades given by each, the second the mean variation of the grades given by each, and the third the median grade actually given by each.

It seems evident that very few of these teachers could interpret rightly the grades given by any other one of them.

Suppose two applicants of moderate and equal ability for the same prize, one graded by No. 2, the other by No. 7 of Table III (one gives a grade of 74, the other of 92) it is evident that one would have an unfair advantage of the other. And it often occurs, under the elective system, that two such teachers are found in the same high school, normal school or college, and pupils who elect work with the one giving high grades have very unfair opportunities to win honors, or prizes. It often occurs that state, county and city examiners for teachers' certificates, vary as widely in their personal tendencies of marking as do any of the teachers whose grades are shown in these tables. It is highly probable, too, that the judgments of civil service examiners are just as prone to error. The simple truth is that the language of grading is as full of provincialisms and fuller of solecisms than was any Indian language at the time of the discovery of America; that the large majority of teachers and examiners can neither give grades which will be rightly interpreted by others nor interpret rightly grades given by others.

It seems to me essential that each teacher and examiner be led to know this by actual tests, similar to the ones here described, and not merely by theoretical discussions as to how grades should be distributed. Groups of teachers should have the opportunity of trying to express the same thing by their marks and seeing how differently they actually express it (that one gives an average mark of 74%, another of 92%, with nearly all the questions and answers identical).

Once thoroughly impressed by actual experience with the fact of her own "provincialisms" and "solecisms" in grading, each teacher is prepared to look for some guide to the use of expressions which will be understood, if not by all, at least by the greatest number who try to use the same language. As a tentative guide, the plain averages given by the group may be used without serious error, especially if the group be large and gathered from different localities; for then we might expect both "provincialisms" and "solecisms" to be reduced to a minimum in the average, even though used frequently by individuals.

Hence, each teacher may discover her peculiarities of grading by comparing the grades she gives with the averages given to each, and her tendency to grade high or low by comparing the average grade she gives with the average by all.

In normal schools, teachers' colleges, teachers' institutes and teachers' meetings (wherever teachers meet for professional training), it seems to me it would be practical and very helpful to present questions on the professional work taken in common, questions requiring thought as well as memory, asking each teacher a series of 10 or more questions orally before the whole group, and while she answers orally letting all the others mark her answers according to whatever system of marking they are to use. The average grade given by each teacher could then be compared with the average by all, and each teacher would learn at once of any constant tendency to mark high or low (and this is the source of the most constant and misleading errors). With her attention once called to the direction and amount of her constant error, each teacher would strive to correct that constant error in all her future judgments. This process could be repeated until the teachers coincide more nearly in their judgments. By this time each teacher will have passed a large number of judgments so that a curve of distribution of the grades by each teacher could be compared, with profit, with the curve of distribution of all the grades given, and with the probability curve. Besides this, each teacher should be encouraged to compare the separate grades given by her with the averages given to each applicant by the group, both as to the actual grades given to each member and the order in which the applicants are placed by her grades and by the averages. This will indicate whether, besides her constant error of grading high or low, she needs to guard against variable errors which show a tendency to the occasional placing of a higher mark on a poorer performance than on a better one. If it seemed best one might also find the average deviation of the judgment of each examiner from the average grade given to each applicant and weight the judgments of the examiners according to either of the principles explained above. The central tendency and variability of grades might also be shown as in the last three rows of Tables II and III. As has already been suggested, the more laborious process of securing the weighted averages might, as a rule, be omitted. If time were limited, the getting of the grades and the averages found in the first column to the right of and the first row below the double line of these tables should present the lessons of greatest importance and interest to earnest teachers, and if attention were focussed on these most important lessons a fair degree of uniformity in grading by the members of such a group should be secured.

Should certain teachers be unable or unwilling to make their marks coincide with the requirements of such a plan, and if the direction and amount of their error were fairly constant, an approximate correction of their marks could be made before they were placed on the school record, and this direction and amount would have been determined during the course of the experiment here suggested. If at the end of such an experiment the errors of the judgments of certain teachers remain both great and variable, it will be readily seen that their judgment in such matters cannot be trusted nor used as the basis for computing right judgments.

BIBLIOGRAPHY

CATTELL, J. McK. Examinations, Grades and Credits. Popular Science Monthly, 1905. Vol. 66. p. 367.

DEARBORN, W. F. School and University Grades. Bulletin of Univ. of Wis. 1910. No. 368.

DEXTER, E. G. High Grade Men in College and Out. Popular Science Monthly. 1902. Vol. 62. p. 429.

FOSTER, WM. T. Administration of the College Curriculum. Boston, H. Mifflin Co., 1911. 300 p.

HALL, W. S. A Guide to the Equitable Grading of Students. In School Science & Math., Smith & Turton, Chicago.

JONES, W. FRANKLIN. An Experimental-Critical Study of the Problem of Grading and Promotion. Psy. Clinic, 1911. Vol. 5, Nos. 3 and 4. pp. 63-96; 99-120.

MEYER, MAX. The Grading of Students. Science, N. S., 1908. Vol. 28. p. 243.

MILES, WALTER R. A Comparison of Elementary and High School Grades. 1910. Ped. Sem. Vol. 17. pp. 429-450.

WISSLER, CLARK. The Correlations of Mental and Physical Tests. N. Y., 1901. 62 p.

DR. MARIA MONTESSORI AND HER HOUSES OF CHILDHOOD

By Theodate L. Smith

Within the last few years an experiment in elementary education has been going on in Rome which is productive of such remarkable results that it is attracting widespread interest in all educational circles. In Dr. Maria Montessori's *Case dei Bambini,* children from four to five years old read, write and do number work with a facility equal to that of children of the second and third grades, and this result has come about with no over-exertion on the part of the child and without the slightest forcing but as a process of normal development. Dr. Montessori's method is due to no fortuitous circumstances but is the result of years of scientific research and is founded on anthropological and psychological principles. The first woman to receive the degree of M. D. from the University of Rome, while acting as assistant in the Psychiatrical Clinic of the University of Rome she became interested in the education of feeble-minded children and devoted herself to the study of this problem. She made herself thoroughly familiar with the work of Seguin and with Itard's experiment with the savage of Aveyron, and investigated the Seguin method as used in the Bicêtre. As a result of her lectures on the education of the feeble-minded, given at Turin and Rome in 1898, she was appointed director of a new school, the *Scuola Magistrali Ortofrenica,* which for two years she conducted with great success. At the end of that time she re-entered the philosophical department of the University of Rome and devoted herself to the study of experimental psychology and anthropological pedagogy, continuing the work for seven years and making investigations in the schools and in the psychological laboratories of Italy. In 1906 an opportunity for trying upon normal children the methods worked out upon the feeble-minded was offered to her through Edoardo Talamo, the head of a real estate society which was part of a scheme for social betterment in Rome. In the group of tenement-houses managed by this association, between January, 1907, and 1908, four schools for children of these tenements were established. For these home schools the following rules were announced:

"Attention must be paid to the health and the physical and moral development of the children by means of lessons and exercises adapted to their age.

"There will be in charge of each *Casa dei Bambini* a directress, a physician, and a caretaker. All children in the block between the ages of three and seven years have the right of admission to the *Casa dei Bambini.*

"The parents of children attending the *Casa dei Bambini* pay no contribution whatever, but they assume these imperative obligations: A. To send at a specified hour their children to the schoolroom, clean in person and clothing, and with a suitable pinafore. B. To show the greatest respect and deference towards the directress and all other persons connected with the *Casa dei Bambini,* and to coöperate with the directress in the work of educating their children. At least once a week mothers will be able to speak with the directress, reporting observations on their own children in their home life, and receiving from the directress notes and suggestions for the welfare of the children.

"There will be expelled from the *Casa dei Bambini,* (a) those who present themselves in an unwashed and slovenly condition (b) those who show themselves not amenable to discipline, and (c) those whose parents fail in respect to those placed in charge of the *Casa dei Bambini,* or in any way threaten to destroy by bad conduct the educational work which is the aim of the institution."

As a further incitement to the keeping of these rules, the report from the *Casa dei Bambini* was to be taken into consideration in the yearly award of prizes offered by the society for the best-kept tenement. The greatest difficulty in carrying out the experiment was naturally in obtaining teachers or directresses, as they are called, who were both adapted by nature and sufficiently trained in the principles of Dr. Montessori's method to conduct the work successfully. This will probably always be one of the chief difficulties in the successful application of the method, but the work has passed beyond its beginnings, as part of a sociological experiment, to private schools for children of the more fortunate classes, and is beginning to be introduced into public school systems not only in Italy but in other European countries. In Switzerland there are now seventy schools conducted by Dr. Montessori's method.

The fundamental principles which distinguished Dr. Montessori's method are the complete liberty of the child in its spontaneous manifestations and the utilization of every atom of its natural energy. Dr. Montessori calls a child disciplined who is master of himself and therefore able to dispose of or control himself whenever he needs to follow a rule of life. The liberty of the child must have as its limit only the collective interest. He must then be hindered from any acts offensive or harmful to others. All else that he does must not only be permitted but observed by the teacher, and the teacher must have not only the capacity but the interest to observe this natural development. She must avoid rigorously the repression of spontaneous acts and the imposition of work at the will of another. To interfere with this spontaneity is, in Dr. Montessori's view, perhaps to repress the very essential of life itself. The aim of discipline is to train to activity, to work, for the welfare of self and of others. To this end the development of independence in the child is necessary. So long as he is served by others and dependent upon them, dressed and undressed, fed, and so forth, he is not free. But if properly trained he ought to be able to do these things for himself by the time he is three years old. It is, of course, far easier to feed and to dress a child than it is to teach him to do it for himself, but the first is the work of a servant and the latter of an educator.

In Dr. Montessori's system rewards and punishments are banished. Reward comes in the child's own sense of mastery. Failure is a mere negation, to be taken as a sign that the child is not yet ready for that particular exercise. The teaching is almost entirely individual and the three fundamental rules for lessons are that they shall be brief, simple and objective. No superfluous words must be used in giving the lesson since they tend to confuse the child and to distract his attention from the main point, and the teacher must not insist on the repetition of a lesson against the child's inclination, and she must not let the child know that he has failed or has not understood.

If one visits one of Dr. Montessori's schools, the children all seem to be occupied in interesting play. Some are lying on the floor playing with blocks or strips of wood painted in different colors. Some are playing blind-fold games, finding out by the aid of their fingers alone the shapes and sizes of objects and different textures of silk, satin, wool or linen. One child who was absorbed in writing on the blackboard did not even notice my entrance into the room. She was writing in large vertical script and forming the letters beautifully, and in answer to my question as to how long she had been writing, I learned that she had begun the day before. Occasionally some child called the teacher when he had finished his game and received either approval or a suggestion that perhaps he would like to do something else. But the interest and the attention of the children is never interfered with. If a child wishes to spend the entire school period of two hours in doing one thing he is allowed to do so on the principle that the spontaneous attention is a fundamental educative principle which must not be interfered with. In spite of the fact that this particular school in the convent on the Via Guisti draws its children from an exceedingly poor section in Rome, their appearance was neat, and although no discipline was apparent, the schoolroom was in the truest sense controlled and orderly.

The first item in the order of the day's exercises when the children arrive at nine o'clock (for in this particular school the children are cared for from nine until half past five, although only two hours or at most two hours and a half are devoted to school work), is a visit to the toilet rooms, where they are taught to wash their hands and their faces, necks and ears, and to put on their pinafores, which they do for themselves or by helping each other. Then comes a tour of inspection of the schoolroom to see that everything is in perfect order, to detect if there is any dust left in corners or if anything is out of place, that any deficiencies in this line may be remedied by the children themselves. There is also play in the garden until ten o'clock. As the pedagogical method has been developed from those used with feeble-minded children, many of the things which the younger children are doing are familiar to those who have seen the instruction in the schools for defectives. Various items in the way of motor-training, buttoning and unbuttoning, tying and untying, hooking and unhooking, lacing, and so forth, are all a part of the lessons of the little ones. But they are lessons which the child works out for himself. He is allowed the pleasure and the triumph of finding out how to do things himself. To a certain extent imitation comes in, since he sees the other children doing these things. There is also a regular system of sense training. In this sense training some of the materials used are the regulation kindergarten gifts. In other cases, they are materials devised by Dr. Montessori or everyday objects which are adapted to the purpose, for Dr. Montessori's fundamental principle when she began her work was to study all systems but to be bound by none. She kept as her fundamental principle Wundt's saying that all methods of experimental psychology are reducible to one, that of controlled observation, and her system has been worked out by this method of individual observation of the child and consists in giving it the environment adapted to individual normal growth. The touch and muscle-sense, which seem to have fallen into disuse in the teaching of normal children, Dr. Montessori has re-introduced from her experience in the training of defective children, and in the plays and lessons constant use is made of the principle of establishing the associations between visual, muscular, and tactile, and auditory sensations. For example, in the sight training, the children have a set of cubes graded from large to small. They are given these to pile up in the graduated order. They are taught to run their fingers along the outlines and thus connect the tactile, muscular and visual sensations. Then they have blindfold games, in which the blocks are piled wholly by the sense of touch, the children finding a great delight in discovering when the bandage is taken from their eyes that they have "seen with their fingers."

In her first school, Dr. Montessori found that her children from three and a half to four and a half years old were already fairly expert in the preliminary training. They could dress and undress themselves, that is, they had learned to apply practically their various exercises in buttoning, unbuttoning, lacing, tying, etc.; they had learned to be neat in person, they had had considerable sense training, and they were eager for something more, in fact they clamored to be taught to read and write, and the experiment was tried with surprising results. The writing came first. Dr. Montessori had learned by her experience with feeble-minded children that in the process of learning to write the mechanism of muscular control and holding the pen should precede the mental effort of learning to write. The child should not be set to the task of learning to manage a pen and produce certain forms at the same time. The didactic materials for training the muscular mechanism and for holding and managing instruments of writing are, for the first step, either solid or outline forms of triangles, squares and other geometrical figures, made of metal, cardboard or wood. The child traces the outline of these and is then given a colored pencil of large size, to fill them in. No directions as to manner of holding the pencil or of making the marks are given to the child. His movements are left free and unconstrained. At first, naturally, the filling is irregular, often exceeding the outline or failing to touch it at every point, but the children enjoy playing with these colored forms and gradually the strokes become even and the space is accurately filled in. When this happens, the child is ready for the next step but a week is usually allowed to elapse before it is taken. Script letters of large size cut from fine emery paper are pasted upon squares of cardboard, and the alphabets thus formed are placed in a case, there being four copies of each letter, and the letter is also painted at the bottom of the compartment to assist in the resorting. The child is given a letter, a vowel first, and told to touch it. Being already expert in this sort of exercise, he usually does it correctly, but if need be the teacher takes his hand and directs the first and middle finger properly about the form of the letter and at the same time the teacher says, "This is *a*," giving, however, the phonic sound, not the name of the letter, thus associating the visual and the tactile and muscular sense with the phonic sound. The child is usually interested in this and repeats it by himself, in some cases many times. The next step is to teach the child to recognize the letter when he hears the sound corresponding to it, so the teacher says to him, "Give me *a*" or whatever the letter is. And the third step, after the letter has been lying on the table for some minutes, is to test the memory and recognition, and the teacher asks the child, "What is this?" the child, of course, being expected to give the phonic sound of the letter. The vowels are usually taught first and the consonants second but there is no established order, as often the interest of the child in certain words or letters will determine the progress. In giving the consonants the teacher gives the sound of the letter several times, for instance, *m, m, m;* she then combines it with vowels which the child knows, saying *ma, me, mo,* but always finishing with the sound of the consonant, *m, m, m,* and having the child repeat this after her. Besides the individual letters, words are given in the same way. For instance, the word mano. The teacher says to the child, "Give me *m*," and so on with the other letters, giving the phonic sound to each letter, and finally pronouncing the word *mano,* the child always tracing the word with the fingers. This they often do blind-folded and a very common request in the school-room to the teacher is "Please blind-fold me," or "Please put the bandage on." Some day when the child has become familiar with the vowels and a part of the consonants, for it is not considered always necessary that the entire alphabet should be learned before he begins to write, he is given a piece of chalk, and having potentially learned to write without ever having had an instrument of writing in his hands, he suddenly finds himself in possession of a new power and thinks he has grown old enough to write. For a few days this acquisition becomes an absorbing occupation. When I marvelled at the remarkable accuracy and evenness in the formation of the letters I asked the teacher if the children were given no directions as to evenness of stroke. Her answer was, "They teach themselves." No child is ever told that a letter is faulty but the practice in tracing the sandpaper letters with the fingers is kept up long after the children are able to write and in fact they write more by muscular sense than by sight, and if a child is in doubt as to the next letter that she wants to write, instead of looking at the letter, she runs her fingers over the cardboard model, so that the muscular training is continued.

In learning to write, the child has taken all but one step in learning to read. He knows the letters by sight and the sounds which correspond to them. He has learned in composing words to associate those combinations of symbols and sounds with the word and the object or action for which it stands. But he has no practice in translating visual symbols into their meanings. In Dr. Montessori's reading lessons there is no particular effort made to begin with easy words. That is not necessary, for the child already knows how to read the words as composed by their sounds as he himself has put them together. The remaining step in learning to read that is to silently interpret the visual symbols, is made a game. A number of cards containing the names of objects or actions, in script, are placed in a box. The objects used are usually playthings. The children are allowed to choose one. The child must read the word mentally, that is, without pronouncing it aloud, and keep it a secret from the others. Then when he gives it correctly he gets the object to play with. And as in all the plays and games use is made of the spirit of co-operation. Children are included in the game who do not yet know how to read, and some child who has already learned, chooses for the little one, who is not yet so far advanced, and gets the desired plaything for him. This particular game is exceedingly popular and can be greatly varied. Names of the children, of objects, of actions, which the children are permitted to execute, are all used. And the children continue to carry on this game in their recreation hours as well as in the school period, spontaneously. In passing from words to phrases and sentences the children are given cards on which directions or request for some action is written, no particular effort being made to express these in any terms simpler than would be used in ordinary conversation. For example, "Close the window-shutters, open the door and then wait a moment and put them as they were," and the child carries out the directions.

Teaching of number and beginnings of arithmetic are also taught in Dr. Montessori's schools. The children three years old usually can count as far as three when they first come to the school. In teaching them to count, the objects about them are used. For instance, it is said to the child, "There are two buttons lacking on your pinafore," or "Three more plates are needed on the table," or playthings are used as objects of numeration; in general, things at hand rather than any special apparatus. The first definite lessons are in changing money. Actual money is used, care being taken for hygienic reasons to procure new pieces. The children first learn the names and values of the coins and then match the larger pieces with the number of smaller pieces required for the equivalent. As further material for teaching, a set of rectangular bars already used in sense training is utilized, the longest of these being a meter and the shortest a decimeter in length and all divided into lengths of a decimeter, painted alternately red and blue. These are used as aids in counting, and in their different arrangements, for the simple processes of addition and substraction. Little sets of colored spindles, and colored counters and rods, have also proved attractive material. There are also used two boards placed at right angles, one placed horizontally on the desk and the other remaining vertical, the horizontal one being divided by strips into five compartments, in which objects may be placed, and large figures are placed in the vertical series, so that a number of objects can be placed in the corresponding compartments of the horizontal board. Various games and exercises are played with this. Froebel's cubes and the discs used in playing quoits or any other convenient material is used. The teaching of zero naturally presents more difficulties than the teaching of the digits. A sample lesson on the zero is the following: A group of children stand around the teacher, who says, "Take zero steps." There is an immediate impulse to movement and the teacher says, "But zero is nothing." A second trial and the children stand still and laugh. Then the teacher tries again, "Come and give me zero kisses." Again the children laugh but stand still in their places. And so the game goes on, varied with the digits, a lesson in inhibition and self-control as well as arithmetic being skillfully introduced into the teaching. Another play which involves a lesson in self-control as well as arithmetic is a game in which the children choose from a box on the teacher's desk a folded paper containing a number, which they are to take to their places without showing anyone, keeping it quite secret, and having read it and after its verification by the teacher, they may take the number of objects or playthings from the desk corresponding to the number on the paper. There is generally, at first, a tendency to take a larger number than that called for. But here again the approval of the teacher as to the correct choice becomes a restraining influence. They are at liberty to take more than the number but the exact number is the thing which wins the teacher's approval. Here, again, the child with the zero has a lesson in self-control for she is apt to show disappointment in her expression but it is a part of the game to keep it quite secret, so she, too, comes to learn the value of absolute correctness and in the end to consider it just as much fun to get the zero and not let anybody know it, as to draw the nine. There are many other lessons or plays in this school which are not to be found in ordinary schools. The game of silence, for instance, is one which the children not only enjoy, but as they grow more perfect in the game they learn many things about what makes a sound, as for example, their own breathing, other movements. They learn to notice the ticking of the clock and the many little noises which, as a rule, do not come into consciousness and as a means of control the game of silence is often very effective.

It will be noted that refractory children who are not amenable to discipline are dismissed from the *Casa dei Bambini*, but a question as to the actual number of refractory pupils was met with a smile. They occur but rarely and in Dr. Montessori's view, a naughty child is a sick child and to be treated accordingly. In actual practice, a child who does not naturally fall into the ways of the school is simply given a little chair and table with playthings apart from the others and especial tenderness shown him because he is sick and cannot take part in the common life. Suggestion and the natural impulse to imitation are the mental therapeutics employed, but a physician forms a part of the regular staff of every school and the children receive any needful medical treatment.

Taken in its entirety, Dr. Montessori's system involves physical as well as mental development and in her schools simple apparatus adapted to the needs of the children and exercises both for development and grace of movement are given. She lays stress, too, on diet and in the philanthropic schools where the children are given at least their noon meal, this can be to some extent carried out, for it is the development of the whole child that Dr. Montessori seeks. As yet Dr. Montessori has not carried out her method experimentally beyond the kindergarten age, that is, three to seven years, but she looks forward to doing so. But even in its present stage of development her system of training would do away with certainly the first two grades of the ordinary school system.

Within recent years we have had in Germany and the United States published reports of children who according to our usual estimate are mental prodigies, who like Dr. Sidis' son or the children of Dr. Berle and Professor Wiener of Harvard are prepared for and do enter college at ages varying from 11 to 14 years. It is claimed by the parents of these children that their remarkable proficiency is due not to special natural endowments but to methods of training. And it is interesting to note that these methods of training, though never formulated into a system and differing somewhat among themselves, and having the emphasis laid on different factors, have nevertheless certain principles in common, and these agree with those laid down by Dr. Montessori: the conservation of the natural energy, of natural interests, early training in self-reliance, in habits of attention and quick, correct thinking, and this without forcing. Dr. Sidis emphasizes suggestion more than the others, but he, too, declares that the chief aim in education is to train the child to make " any habitual and profitable use of his hidden energies."

In these days of keen competition in professional and business life when more and more specialized training is required, the question of the conservation and utilization of natural energy becomes of great import. We have had critics in plenty of our school systems and their lamentable deficiencies, and endless discussions as to where time might be saved, but of constructive work of demonstrated efficiency, Dr. Montessori's schools furnish a challenging example.

A detailed exposition of her method has been given by Dr. Montessori in her *Il Metode della Pedagogia Scientifica Applicato all' Educazione Infantile nelle Case dei Bambini,* published in 1909, (*Città di Castello, Tipografica della casa editrice* S. Lapi), and for those who wish to make a scientific study, her "Antropologia Pedagogica," published in 1910, will also be of interest. A German translation of the former work is already in progress. The only notices of her work which have as yet appeared in English are articles in the May and December McClure's of the present year, which attracted widespread attention, and a few brief notes in educational or medical journals.[1]

---

[1] An English translation of the Metodo della Pedagogia Scientifica, which will be ready early in 1912, is now in preparation by the F. A. Stokes Pub. Co. of New York. Arrangements have also been made to furnish materials for the Montessori method at the House of Childhood, 603 Flatiron Building, New York City.

THE SUPERVISION OF COLLEGE TEACHING

By Samuel P. Capen

The assertion is often made that nowhere else in our educational system is such poor teaching to be found as in college classes. In view of this criticism the following incident which has lately come to the writer's knowledge is somewhat significant. A few years ago the superintendent of schools in a middle western city visited all the courses in liberal arts at one of the large eastern universities. He spent several weeks in the task and graded the work of all instructors according to the standards which he commonly applies in judging his own corps of teachers. His marking showed that, judged by these standards, about sixty per cent of the professors and instructors were too poor to keep. About twenty-five per cent were passably good, but should be urged to give more attention to the methods of presenting their respective subjects. About fifteen per cent were excellent.

Of course, these figures do not actually prove the inferiority of college teachers to those employed in public school systems. They are the result of observation in a single institution and by a single examiner. But they are perhaps indicative of a condition which is wide-spread.

The efficiency of colleges and universities is now a common subject of investigation. Both inside and outside agencies have studied the various departments of university administration and have suggested many improvements. But as far as the writer is aware the question of supervising the work of college teachers has not yet been publicly discussed. The teaching force is doubtless the most important part of the educational machine. If the efficiency test is to be thoroughgoing it should be applied here also. Believing that the preliminary condition for a discussion of this subject must be at least a partial knowledge of the facts, the writer has undertaken to find out what is the practice of some sixty representative institutions in regard to this matter of supervising the work of teachers.[1]

A communication containing the questions given below was sent to the Deans or Presidents of the institutions chosen, all of whom replied. Many of them also offered valuable suggestions in addition to the information solicited.

---

[1] The names of the institutions are listed at the end of the article.

1. Does the President or the Dean inspect the classroom work of the professors and instructors in your institution at regular or irregular intervals? Does the head of each department inspect the work of subordinate members of the department?

2. Do the trustees or the alumni of your institution send a visiting committee to oversee the work of the teachers? If any other system of supervision is employed will you kindly state what it is?

3. Do the supervising or inspecting officers suggest to the inexperienced members of the staff how their teaching might be improved?

4. Does information in regard to the teacher's work in the class-room, gained through inspection, form the basis for promotion or discharge? If not, what is the basis for promotion?

5. Do you think the establishment of a system of supervision, if one does not already prevail in your institution, would be resented by the teachers? Do you personally think that some method of official inspection is desirable?

The information obtained may be briefly summarized as follows:

	No. of Institutions.
Supervision exercised by President	12
Supervision exercised by Dean	1
Supervision exercised by Heads of Departments	24
Supervision exercised by Committee of Trustees or Alumni	14
Supervision exercised by no one	19
Suggestions made to inexperienced teachers by Heads of Departments	30
Suggestions made to inexperienced teachers by President, Dean or Committee	9
Suggestions made to inexperienced teachers by no one	21
Promotion on general impression of work and personality of teacher	24
Promotion on results of inspection combined with general impression	15
Promotion on recommendation of Heads of Departments	8
Promotion on length of service	1
No information given	9

	No. of Institutions.
Reporting officers believe supervision would be resented.	22
Reporting officers believe supervision is desirable.......	34
Reporting officers believe supervision is undesirable.....	14

The most striking feature of the returns[1] was the large number of college officers who believe that some form of administrative supervision is desirable. It is the writer's belief, but one which he did not expect to find shared by so many others. There are serious objections to almost every form of supervision suggested in the questions sent out. These objections will be apparent to any reader, but for the sake of completeness they might be summarized here.

In the first place tradition sanctions the "laissez faire" policy with regard to college teachers. It is their inheritance from the time when Lehrfreiheit was fought for and won, and from the time when pedagogy was either unknown or looked at askance. To break down the tradition would probably cause deep resentment in many quarters.

Moreover, the feeling of independence which most college teachers enjoy is one of the strongest motives toward fruitful and unhampered work. The college teacher is in much the same position as the creative artist, who is a law unto himself; and if the teacher is truly an artist in his field no more favorable condition for his work could be conceived. There is also a distinct inspiration to students in the unconstrained devotion of the best type of teacher to his profession, in his conscientious performance of duty unenlivened by the presence of a boss. Teaching is largely a matter of personal influence. If an educational institution or system adopts too many mechanical methods it may submerge personality and thereby interfere with the somewhat mysterious influence of teacher upon pupil.

---

[1] The returns developed certain facts in addition which are not shown in the foregoing summary. In several institutions both the president and the heads of departments inspect the work of instructors. Several others have both a system of committee visitation and one of departmental visitation. In nearly half of the twenty-four institutions in which visiting is reported done by heads of departments the administrative officers are not sure whether the visits are actually made or not. It seems fair to assume, therefore, that these institutions have no real system of supervision. Most institutions which are visited by committees of trustees, alumni or state officials report that little profit is derived from the visitation. The duty is often done in a perfunctory manner. The officials are seldom qualified to judge the work of the instructors and they generally do not stay long enough on the premises to make a careful observation. In only two of the institutions where this type of visitation is in force are the administrative officers satisfied with it.

It is doubtful whether any officer now commonly employed by a college would be able to supervise the work of instruction in all departments. College presidents are often not teachers; and even those who have taught are generally elected to the administrative office on the ground of other capacities than skill in the classroom. Deans also are not always the best teachers, or the most skillful judges of teaching. And surely committees of outsiders, whether trustees or alumni, do not possess the expert qualifications for such an office.

Finally, it is felt in many quarters that the financial return made to college teachers is so small that they should not be held to too rigid a standard of excellence.

On the other hand there are several arguments in favor of more systematic oversight of the work of college teachers, which it is the purpose of this article briefly to present.

First, the interest of the institution and of the students should be guarded. There are many men and women occupying teachers' positions who should never have been allowed to teach. This does not necessarily mean that they are of inferior mental power, merely that teaching is not the occupation suited to their talents. All of us know some of these pathetic failures. They are a source of dissatisfaction both to themselves and to the institution which employs them. Had they been turned aside in time they might have found a career of real usefulness and success. But the most important consideration is that generations of boys and girls would have been saved from the harmful ministration of bunglers. A more carefully guarded system of appointments and promotions would protect both institutions and students from such as these.

Nearly all institutions are peculiarly subject to malpractice at the hands of the fledgling instructor. The present requirements for holding most college positions do not include previous teaching experience, or even training in the art of instruction. To be sure, teaching like any other art can only be learned by practice, but there are certain underlying principles which enable the beginner to avoid many mistakes and help him shortly to find the best way to present his subject. Most young college instructors are totally unacquainted with these. However well they may know their subjects, a little friendly oversight at the outset would shorten the path to reasonable perfection in the art of presentation. Obviously, both the institution and the instructor would gain by the arrangement. It is discouraging to flounder just beyond one's depth, when the touch of a helping hand might bring one's feet in contact with the bottom. The young instructor often flounders for years before finding his feet and in the process he has wasted much vital energy which should have gone to the advancement of his work. The institution owes its young teachers this help as much as it owes its students protection against incompetence.

There is nothing more unjust in present-day educational administration than the policy of most colleges in regard to promotions and dismissal. No two college teachers can be equal in skill or attainments, to be sure. Personal differences are perhaps more clearly evident in teaching than in most other forms of work. It would surpass human ingenuity to devise a method of classifying college teachers according to merit. However, promotions from the rank of instructor to that of assistant-professor, and from an assistant-professorship to a professorship should be made with full knowledge of all the available facts. In the relatively few cases where men fail of promotion, also, the advancement should be withheld only as the result of the fullest information. A teacher who is not promoted may justly feel aggrieved unless the administrative officers have investigated his work.

Now, it will be observed, that very few of the institutions reporting claim that promotions depend upon actual knowledge of a man's work in the classroom. From various sources the administrative officers get a general impression of a teacher's value and capacity. His attitude in faculty meetings and in committees; his judgment on matters of college policy; his personal magnetism, or the lack of it; the opinions expressed accidentally by students in regard to his work; the feeling of his colleagues toward him;—all these elements, and others also, enter into the rating of the man. On the basis of these impressions he is promoted or held back. In extreme cases he may be asked to resign.

That this is unfair, everyone who is familiar with the remarkable fickleness of college communities must know. A man who is a candidate for promotion or whose dismissal is desired is entitled to be judged by something more tangible and more definite than impressions. In any other business relation the promotion or discharge of an employee depends primarily upon his ability to perform the particular piece of work he is hired to do. The relation between a college and its teachers is distinctly a business relation, and should be so regarded by both parties to the contract. An instructor is hired to teach. If he can do it successfully he should be advanced. If he can not, he should be dropped, without compunction and without delay. But such action is only justified when the employing authorities have direct evidence of his incompetence.

Thus far only the conscientious incompetents have been alluded to. There is another class of inefficient college teachers, fortunately a small one and still more fortunately a decreasing one. I refer to those who shirk. The tendency to stagnate is almost irresistible in certain kinds of college teaching. That no more fall a prey to it is perhaps the best testimony to the high ethical tone of the profession. But there are some who do. There are some who give the same lectures year in and year out, whose horizon never expands. There are some who go to their work unprepared and spend the hour marking time. These are the men who sadly need the stimulating presence of a supervising officer.

Lastly, there is the instructor whose interests lie chiefly in the direction of original research. The question is still disputed whether research or teaching is the principal function of the college instructor and it is not the purpose of this article to add to the discussion. One consideration, however, may be presented. The possession of a strong scientific interest undoubtedly conflicts, to some extent, with due attention to the art of teaching. The pioneer in science may be a great inspirational force to his students, but he often does not give them much more than inspiration. He could be helped by suggestion from one whose specialty was presentation. The institution would not lose any of his value as an investigator, but the students would gain much if his skill as a teacher were increased.

These are the principal reasons why it seems to the writer that a more definite and systematic method of supervising the work of college teachers should be employed. The public school systems of our states and cities have for years appreciated the importance of expert supervision of their teaching force. The superintendent of schools is not a boss, but a friendly critic and helper, the teacher of the teachers. It is his principal function to furnish continued inspiration to the competent members of his staff and to show the novices and the incompetent how to do better. Under the direction of these officers the work of instruction has grown more systematic, more thorough, and more inspired. Methods differ, to be sure, in different stages of the educational process. But the personal characteristics, the tastes, and the interests of the successful practitioners of the art of teaching remain substantially the same in all stages. Is there any reason why a system which works superlatively well when applied to the teachers of youths from fourteen to eighteen should not also prove beneficial to the teachers of youths from eighteen to twenty-two?

In the writer's judgment, the strongest objection to a closer supervision of college teaching is that no college officer now employed is trained for the work. But this objection is, after all, not vital. The first superintendents of schools were untrained. Out of the need grew the profession. Out of the practical experience of the untrained pioneers emerged the principles of professional training. So it is wherever the progress of civilization calls a new occupation into being.

It is evident that in order to perform successfully the functions outlined in this article, the supervisor of college instruction would have to be a man of rare personal gifts. He must be tactful and sympathetic, and he must have an open mind. The dogmatist or the dictator would produce stagnation or rebellion. It would be well that he should have had conspicuous success as a teacher. But above all, his relations with his colleagues should be perfectly frank and without assumption of superiority. Otherwise he would defeat the purpose for which his office was created.

Some colleges might find that they had no one on their staff who possessed the combination of talents, personal and professional, which such an office would demand. But they might, of course, seek the desired article in the open market. It is the writer's belief, however, that on most college faculties there is at least one man—often more—entirely qualified to undertake this dificult task.

There follows the list of colleges and universities which replied to the circular letter:

Amherst College
Baker University
Bates College
Boston University
Bowdoin College
Brown University
Case School
Colby College
College of City of New York
Colorado College
Columbia University
Cornell University
Dartmouth College
Dickinson College
George Washington University
University of Chicago
University of Colorado
University of Florida
University of Georgia
University of Illinois
University of Indiana
University of Kansas
University of Kentucky
University of Maine
University of Michigan
University of Minnesota
University of Missouri
University of Nebraska
University of North Carolina
University of Pennsylvania

Harvard College
Haverford College
Hobart College
Massachusetts Institute of Technology
Middlebury College
Mt. Holyoke College
North Western University
Oberlin College
Ohio State University
Princeton University
Simmons College
Smith College
Trinity College
Tufts College
University of California
University of Rochester
University of the South
University of Texas
University of Vermont
University of Virginia
University of Wisconsin
Vassar College
Wabash College
Washington University
Washington and Lee University
Wellesley College
Wesleyan University
Western Reserve University
Williams College
Yale University

PEDAGOGY AS A SCIENCE

By Paul R. Radosavljevich, New York University

1. The term *pedagogy* has never been defined scientifically. It has been variously understood, or rather misunderstood, by various people and schools. Willmann would have us believe that pedagogy is a collection of historical facts, and calls it historical pedagogy. Others say that there is no systematic pedagogy; but that each age makes its own pedagogy. There are others who claim that pedagogy is mere applied psychology (Sully), ethics (Herbart, Rein), logic, sociology, or aesthetics. Lehmann, Dilthey, James, Münsterberg, and Royce believe that pedagogy is no science at all. Still others claim that the dominant theories in the pedagogy of to-day are based upon a psychology and philosophy which are largely discredited.

2. What is pedagogy? The most common definition is: Pedagogy is the science of education. This is a very short definition. In fact, it has little else, besides its brevity, to commend it. It is immediately found to be insufficient in that it, at once, provokes the question: What is education? And this question can not be answered clearly and definitely in few words.[1] Before considering this any further, let us stop to find out what the word *pedagogue* means. It means first, a practical man, an educator; second, a representative of pedagogical science. Here we distinguish between the science and its representative. In early times, a pedagogue was a man who understood the art of practical pedagogy. A Greek *Pedagogus* was a man who took care of a child.

3. Now, compare this old conception with the present aim and scope of pedagogy. To-day pedagogy has to do with everything that deals with education; it includes the scientific treatment of all questions pertaining to school education, home education, institutional education, etc. This is pedagogy in its broader sense. In its narrower sense, the sense in which it is commonly understood, pedagogy is the science of school education. We will direct our attention to this narrower sense of the word in connection with the elementary public school.

4. Is pedagogy a science, or not? This question has been asked by all practical educators. Herbart, in his "General

---

[1] See my article: What is education (Ped. Sem., 1911, 31-44).

Pedagogy," tried to formulate a system of pedagogy; but this was too extravagant a hope. Many thinkers call pedagogy a "general," "systematic," "practical," "theoretical," "scientific" education. All of these different expressions are but phases of a general science. Here we deal with all the fundamental problems in education. This does not mean that general pedagogy has nothing to do with special problems. Systematic pedagogy means scientific pedagogy, which is something more than an empirical collection of historical facts. It is based on scientific facts and general principles. From this science we obtain empirical knowledge dealing with the proper education of the child. Practical pedagogy is only a part of this systematic pedagogy.

5. Is pedagogy a science? Many say no. There are three general objections to calling pedagogy a science. *First:* Pedagogy is not a science because it has not a domain of its own, it borrows its facts from other sciences; such as psychology, logic, metaphysics, natural science, ethics, school hygiene, medicine, anthropology, physiology, anatomy, sociology, criminology, religion, etc. *Second:* Pedagogy is not a science because it can not formulate general principles which are universal. The theories and practices of one people are not the same as those of other people, nor are they the same as those that may be developed from time to time. Pedagogical facts must change with the political, economical, religious, social, etc., conditions. *Third:* Pedagogy is not a science because it has to do mainly with activities or practices. And there is no science of activities or practices. A human activity or practice in general may be treated as such, but that does not make it a science. The determinative factor in pedagogy is the practice experience. Pedagogy is all very well in theory, but in practice it will not answer. On what scientific basis rest such dogmatic statements?

6. Let us examine these objections in detail. In regard to the first objection we can say that although it is very difficult to formulate a science of pedagogy, it does not mean that we must give it up as impossible. As to the requirement that pedagogy is to have a clear and distinct domain of its own we can say that it is very unreasonable, for this is not true of any science, especially a mental science. Indeed the characteristic of the sciences is that they are interrelated, i. e., they have no clear and distinct borderline. Thus we take up under geography many topics which may be treated as well, if not better, under astronomy, meteorology, climatology and other sciences. Physiology includes many problems of a psychological nature. Yet geography and physiology are

sciences, because they treat certain facts from their own standpoint. The *unity of point of view* and not only the unity of material, is essential to a science. Meumann and G. S. Hall made this clear.

7. The point of view in pedagogy is that of the growth and development of the child under the influence of one who is educating him according to a certain aim and plan. An empirical science can not be a system of knowledge, as Herbart thought. In an empirical science it is impossible to treat facts as they are treated in chemistry, because our inquiry and our experience are not complete.

8. The second objection was raised by the late Wilhelm Dilthey. But his objection is too general and vague. The aims of education may be historical because they change, but we must establish them. The means and ways by which these aims are reached may also be established. And this is quite enough, for it is possible to establish certain principles on which the aims of a certain age are based. A nucleus may also be taken from history, especially in regard to elementary aims. For example; reading, writing, and counting were the elementary aims in all ages. Of course, the ways and methods of teaching them varied from time to time, but their function was permanent. Higher aims allow also of scientific formulation, which may be fairly constant through the ages. The aim should be a general striving of the world toward a certain ideal perfection. Another ideal is to develop the abilities of the child as far as possible.

9. Coming now to the third objection, we may say that no science can furnish a set of rules which will help one in its application as much as practical experience and skill will. For example, one may know the principles of art, yet he can not draw, paint, or mould until he has gained some experience and skill. The same is true of other sciences. In a sense the practical experience and skill is the source of the scientific principle. We then, in turn, adopt certain principles for practical application. This method was unduly overestimated by Pestalozzi. According to his theory any person, with a minimum of intelligence, would do well as a teacher provided he knew the method.

10. To dictate a set of rules for practical application is the last aim of the science of pedagogy. The first thing in pedogogy is the theoretical *understanding* of its practice. This will guide the teacher and enable him to understand what he is to do. Theoretical understanding of practice will supply him with scientific material. It will acquaint him with the mental, emotional, and volitional peculiarities of

his pupils at the different stages of their development. It will lead him to understand why some subjects are selected for purposes of instruction, while others are rejected. He will know what subjects require the analytic and what ones require the synthetic treatment. He will have decided views as to the value of certain subjects, i.e., are the mathematical subjects more valuable than the linguistic subjects? He will also know whether the public school is to give a general or a special education. In short, the theory gives the norms for practice. And let the teacher understand these norms in connection with other modern problems. As a science is always something more than a mere inventory of facts, it is the combination of those facts into a system in such a manner that each fact throws light on all the others. And because no such connection can be made without a general principle, pedagogical principles are just as necessary as facts to form a science.

11. What, then, is the task of scientific pedagogy? It is an experimental science. It has its own data and principles. It is, therefore, entitled to describe and explain pedagogical facts. The scope of these facts is as large as the field of human action. Experimental or scientific pedagogy not only has to describe and explain pedagogic facts, but it also has to lay out the path which directed education is to follow. Further, it is constantly investigating whether or not this directed education is serving its purpose. It prescribes certain norms; it is, therefore, a norm science.

12. Pedagogy is an independent science; for it has its own foundation. The point of view is exclusively pedagogical. No other science takes this point of view. Therefore, no other science is a science of pedagogy. It is impossible to write a pedagogy as an applied psychology or ethics; nor is it possible to treat it as applied logic. There are many sciences that borrow facts from other related or unrelated sciences, such as psychology, ethics, logic, aesthetics, etc.; yet these sciences are not identified with psychology, ethics, or logic. Still less are they said to be applied psychology, applied ethics, or applied aesthetics. Why is it then, that pedagogy is so often called applied this or applied that, when it merely borrows some facts, as other sciences do? There does not seem to be any plausible answer to this question. Yes, pedagogy is an independent science. Not one single pedagogical rule comes from logic or psychology. The facts of experimental pedagogy clearly show that pedagogy is a science with its own materials and facts, and with its own point of view.

13. Many accept the well-known formula of Herbart, namely, pedagogy depends upon its sister sciences, ethics and psychology. Ethics furnishes the aim, and psychology the means of education. But this is not sufficient. Pedagogy has for its aids not only ethics and psychology, but also philosophy, anthropology, physiology, sociology, aesthetics, cultural history, etc. Ethics alone cannot formulate all the aims in education, because ethics is not the only thing the child is to get in a public school. We must not forget that the primary aim of education is intellectual instruction (i.e., knowledge and skill) and that ethical training is only one of the secondary aims.

14. Pedagogy as a science ought to include the following problems:

A. The child's psychological nature and its development. (*Individual pedagogy.*) Here we need a broad conception of childhood. As child, or better to say, pupil study "marks the introduction of evolutionary thought into the field of the human soul" (G. S. Hall), modern pedagogy must be a biological pedagogy, or as Lay says in his Experimentelle Pädagogik (1905, p. 105), "sie muss die *naturale* and *soziale* Seite der biologischen Lebensgemeinschaft gleichzeitig und gleichmässig beachten." Therefore, pedagogy as a science has to study carefully:
  I. The periods and stages of development and growth. (*Biological pedagogy.*)
  II. The difference between a child and an adult; the approach of a child's mental and physical type to that of an adult. (*School anthropology.*)
  III. Not the child in general, but the school child—pupil's place in school work. (*Experimental Pedagogy.*)
    1. Analysis of different kinds of mental processes.
    2. Favorable or unfavorable inner and outer conditions for work.
    3. Technique and methods of mental work. (Economical learning.)
    4. Relation between pupil's work and the school. (Hygiene of home and school work.)
    5. Study of the pupil's emotional and volitional nature. (Development of pupil's ideals, practical aims, moral judgments, etc.)

B. Methods of teaching and education. (*Experimental Didactics.*)

C. Teaching material and means (the claims of logic and psychology deserve here the highest consideration).

Here we have to give a scientific basis for the presentation of school subjects in text-books. (*School Methodology.*)

D. Organization of Schools. (*Practical Pedagogy.*)

E. The final aims of education. (The highest aims: ethical and aesthetical.) (*Philosophy of Education.*)

F. The relation between the child and different classes of mankind, or the relation between school and society, state, and home. (*Social Pedagogy.*)

There is a crying need at present for a critical and systematic study of pedagogy as a science. These few words are only preliminary suggestions.

BIBLIOGRAPHY

1. AIKINS, H. A. The field of pedagogy. (*Western Reserve University Bulletin.* 1897, Vol. 3, pp. 15-21.)
2. ANDREAE, C. Die Selbständigkeit der Pädagogik gegenüber ihren Grund- und Hilfswissenschaften. *Zeit. f. päd. Psy. etc.* 1911. pp. 441-448.
3. ASCHAFFENBURG, G. Welchen Nutzen kann die experimentelle Psychologie der Pädagogik bringen? *Kinderfehler,* 1896. Bd. I. S. 37-41.
4. BAGLEY, W. C. Educational Values. N. Y., 1911. 267 p.
5. BAIN, A. Education as a Science. N. Y., 1883. 453 p.
6. BAIR, J. H. What is Education? *Investigations of the Department of Psychology and Education, Univ. of Colorado,* 1905, Vol. 2, pp. 9-20.
7. BALLIET, T. M. Some new aspects of educational thought. *Proc. Am. Assoc. Adv. Sci.* 1899. Vol. XLVIII, pp. 481-488.
8. BINET, A. Causerie pédagogique. *Année psy.* 1908. Vol. 14, pp. 405-31.
9. BLUM, E. Pédologie (*Année psy.* 1899. Vol. 5, pp. 299-331.) La mouvement pédologique et pédagogique. *Rev. phil.* 1900. Vol. XLIX, pp. 621-36; 47-62.
10. BOLTON, F. Principles of Education. N. Y., 1910. 790 p.
11. BROWN, E. E. Present problems in the theory of education. Congress of Arts and Science. 1907. pp. 64-82.
12. BRAHN, M. Experimentelle Pädagogik. *Päd. psy. Arbeiten.* Leipzig, 1910. Vol. 1, pp. 1-16.
13. BUCHNER, E. F. Education as a scientific pursuit. *Education,* 1903. Vol. 14, pp. 129-147.
14. BURNHAM, W. H. Child Study as the basis of pedagogy. *N. E. A.* 1895, pp. 718-20.
15. BUSEMANN, A. Uber Aufgabe und Abgrenzung der "experimentellen Pädagogik." *Zeit. f. päd. Psy.* 1910. Vol. 2, pp. 481-4.
16. CELLERIER, L. Esquise d'une science pedagogique; les faits et lois de l'education. Paris, 1910. 393 p.
17. CHRISMAN, Q. Paidologie. Jena, 1896. 96 p.
18. COHN, F. Was kann die Psychologie von den Pädagogen lernen? *Zeit. f. päd. Psy.* 1899. Bd. 1, pp. 20-7.
19. COLVIN, S. S. The Learning Process. N. Y., 1911. 336 p.
20. COMPAYRE, J. G. Où en est la psychologie de l'enfant? *Educateur moderne,* 1909. Vol. 4, pp. 257-62; 305-7; 449-52; Les principes philosophiques de la pédagogie. *Rev. ped.* 1911. Vol. LVIII. pp. 101-111.

21. Demoor, J. Cours sur les bases scientifiques de l'éducation. Bruxelles, 1895.
22. Deuchler, G. Zür Frage der Akademisierung der Pädagogik. *Zeit. f. päd. Psy.* 1910. Bd. 11; Heft 1-2.
23. Dilthey, W. Uber die Möglichkeit einer allgemeingültigen pädagogischen Wissenschaft. Sitzungsberichte der Berliner Akademie der Wissenschaften, 1888. pp. 807-32.
24. Dominics, S. de. Scienza comparata dell' educazione. Torino, Stegglio, 1899. 637 p.
25. Dubois, J. Le problème pédagogique. Genève, 1911. 538 p.
26. Dugas, L. Le problème de l'éducation. Paris, 1909. 334 p.
27. Durr, E. Einführung in die Pädagogik. Leipzig, 1908.
28. Findlay, J. J. The scope of the science of education. *Educ. Rev.* 1897, Vol. 14, pp. 236-47.
29. Fischer, A. Die Lage der Pädagogik in der Gegenwart. *Zeit. f. päd. Psy.* 1911. Bd. 12, S. 81-93.
30. Horne, H. H. A Science of Education. Congress of Arts and Science. 1907. Vol. 3, pp. 83-85.
31. Hall, G. S. Educational Problems. N. Y., 1911. 2 vols.
32. ———. What is Pedagogy? *Ped. Sem.* 1905. Vol. 12, pp. 375-83.
33. Henderson, E. N. A Text-book in the Principles of Education. N. Y., 1910. 593 p.
34. Howerth, T. W. Basic ideas of a scientific education. *Educ.* 1902, Vol. 22, pp. 129-40.
35. Huther, A. Die psychologische Grundlage der Pädagogik. *Zeit. f. päd. Psy.* 1900. Vol. 2, pp. 121-32; 192-209; 287-302; 367-83.
36. James, W. Talks to Teachers. N. Y., 1899. 301 p.
37. Jeanjean, G. Psychologie pédagogique: la pédagogie nouvelle. *Rev. de Philos.* 1909. Vol. 15, pp. 516-27.
38. Lehmann, R. Erziehung und Erzieher. Berlin, 1901. 344 p.
39. Lobsien, M. Experimentier-Pädagogik. *Zeit. f. päd. Psy.* 1905. Bd. 7, pp. 23-30.
40. Messmer, O. Das System der Pädagogik. *Schweiz., päd. Zeit.* 1909. S. 346-58. Grundlinien der Unterrichtsmethoden. Leipzig, 1905; Kritik der Lehre von den Unterrichtsmethoden, 1905.
41. Meumann, E. Die gegenwärtige Lage der Pädagogik. *Zeit. f. päd. Psy.* 1911. Bd. 12.
42. ———. Experimentelle Pädagogik und Schulreform. *Ibid.*, pp. 1-13.
43. ———. Entstehung und Ziele der experimentellen Pädagogik. *Deutsche Schule,* 1901. Bd. V.
44. ———. Vorlesungen, Leipzig, 1911. 3 Auflage.
45. Muller, S. Uber das Wesen und wichtige Forschungsergebnisse der experimentelle Pädagogik. Wien, 1908.
46. Munch. Die experimentelle Pädagogik nach Meumann. *Zeit. f. päd. Psy.* 1908. Bd. 10, S. 254-257.
47. Munsterberg, H. Psychology and Life. N. Y., 1899. 286 p.
48. ———. Psychology and the Teacher. N. Y., 1909. 330 p.
49. Palante, G. Une idole pédagogique; l'éducationisme. *Rev. phil.* 1903, Vol. 6, pp. 92-114; 205-17.
50. Persigout, G. Essais de pédologie générale. Paris, 1908. 59 p.
51. Pyle, W. H. Outlines of Educational Psychology. Baltimore, 1911. 254 p.
52. Royce, J. Is there a science of education? *Educ. Rev.* 1891. Vol. 1, pp. 15-25; 121-32.
53. Radosavljevich, P. R. What is Education? *Ped. Sem.* 1911. Vol. 18, pp. 31-44.

54. ———. Experimental Pedagogy. *Zagreb,* 1910. Vol. 1.
55. ———. Modern Didactics. Novi Vaspitach, 1907.
56. Rein, W. Grundlage der Pädagogik und Didaktik. Leipzig, 1909. 140 p.
57. ———. Outlines of Pedagogics. London, 1903. 199 p.
58. ———. Pädagogik in systematischer Darstellung. Langensalza, 1902. 2 vols.
59. Remon, C. La psychologie appliquée à l'éducation. *Rev. d. Cours et Conf.* 1900. 7 juni.
60. Roehrich. Philósophie de l'éducation. Paris, 1910.
61. Ruediger, W. C. The Field of Education. *Ped. Sem.* 1908. Vol. 15, pp. 474-83.
62. Sallwurk, E. von. Das Ende der Zillerischen Schule. 1904.
63. Sanctis, S. de. Psicologia expérimentale e pedagogia. Roma, 1911.
64. Sandor, I. A nevelés sorsa és a szocialismus, az iskolai nevelés lehetösege és nevelöi gondolkodás érdekében. Budapest, 1909.
65. Schlager, P. Experimentelle Pädagogik. *Zeit. f. d. exp. Päd.* 1909. Bd. 8, S. 235-50.
66. Scripture, E. W. Education as a Science. *Ped. Sem.* June, 1892. Vol. 2, pp. 111-14.
67. Seyfert, R. Die Didaktik als Wissenschaft. *Deutsche Schulpraxis,* 1903.
68. Shevich, M. Pedagogical Observation. Belgrade, 1906.
69. Sieler, A. Pädagogik als angewandte Ethik und Psychologie. Altenburg, 1907.
70. Sikorsky, A. Psychological foundations of education. Petersburg, 1908.
71. Sinclair, S. B. The Possibility of a Science of Education. Chicago, 1903. 126 p.
72. Smith, H. B. The Function of Experiment in Educational Science. *J. of Exp. Ped.* 1911. Vol. 1, pp. 31-8.
73. Spearman, C. The Way to Develop Experimental Pedagogy. *J. of Exp. Ped.* 1911. Vol. 1, pp. 1-3.
74. Sully, J. The Service of Psychology to Education. *Educ. Rev.* 1892. Vol. 4, pp. 313-27.
74a. Tanner, A. E. Experimental Didactics. *Ped. Sem.* 1910. Vol. 17, pp. 204-213.
75. Tarrago, J. R. The Limitation of Pedagogy. *Education,* 1908. Vol. 18, pp. 335-50.
76. Thorndike, E. L. The Principles of Teaching Based on Psychology. N. Y., 1906. 293 p.
77. ———. Individuality. Boston, 1911. 55 p.
78. Toischer. Theoretische Pädagogik und allgemeine Pädagogik. München, 1896.
79. Ushinsky, K. The Man as the Object of Education. St. Petersburg, 1894.
80. Weber, E. Experimentier-Pädagogik. *Saemann,* 1905.
81. Willmann. Die Erhebung der Pädagogik zur Wissenschaft. Közel, 1898.
82. Winch, W. H. Problems in Education. London, 1900.
83. Winteler, J. Ergebnisse der experimentellen Pädagogik. Eos, 1907, S. 264-98.
84. Woodward, C. W. The Science of Education. *Proc. Am. Assoc. Adv. Science,* 1907. pp. 335-56.
85. Young, E. F. Scientific Method in Education. *Decen. Public. Univ. of Chicago,* 1903. Vol. 3, pp. 141 et seq.

BOOK NOTES

Idealism in Education, or first principles in the making of men and women, by H. H. HORNE. New York, The Macmillan Co., 1910. 183 p.

As the title would suggest, this new book, "Idealism in Education," by Dr. Horne, is based on Hegelian philosophy in the protest against the more recent tendencies to discuss educational principles from purely biological or psychological points of view. The author fears that the philosophical aspects and especially idealism are being slighted. The work is acknowledged to be, in many respects, a sequel or expansion of the views formerly expressed on pages 252-254 of the author's "Philosophy of Education." The main thesis to be defended and amplified is that will, or the individual's own control or choice when other things are fixed, is co-equal with heredity and environment in determining behavior. Heredity must be emphasized for the unconceived generation, environment for the child of to-day, and will for the adolescent or adult.

Galton coined the term "eugenics" to express proper heredity. J. A. Thompson uses the term "eutopia" to characterize desirable environment. The author suggests "eunoia" or "good will," of orthodox Greek coinage, to complete the trinity of "eus" constituting what he calls "the empirical first principles in the making of men and women." The new term reflects "the traditions of Socratic intellectualism" and "suggests feeling and acting in accord with knowledge."

In its general scope the book takes up the three cardinal aspects of man-making as the author views them. Heredity, environment and will are each treated in their relations to pedagogy rather than to pure science or philosophy. No effort is made to take issue with theories or policies in the biological fields and no contributions are offered. The author merely presents the salient facts known about them in an effort to show that each along with will must be considered in all educational policies and reforms. In a closing chapter the author exercises his personal prerogative and his philosophic bent by going beyond knowledge into speculation. In this, the reader is given a hasty survey of the various philosophies or "guesses" which have been advanced in attempting to explain the process of man-making. The progress of the world along several lines under these hypotheses is also reviewed.

The entire study seems to point to the exaltation of idealism and the establishment in the author's mind, at least, that within the limits which heredity has fixed for the individual and which the opportunities of environment have prescribed, the individual may become what he will; and so long as science is unable to point out those limits, it is safe to encourage the exercise of a broad and comprehensive free will, to hold up the greatest characters of history, who are "the earnest of the coming men and women God is making through present men and women, and thus raise the standard of expectancy in the minds of the children.

In its form the work is especially to be commended for its clear logical arrangement and the lucid sincere scholarly manner in which it is presented. The table of contents is analytic, presenting every chapter in its main topics as well as in its sub-heads, so that the busy reader may grasp the scope of the book in a few pages. Of no less interest is the well selected bibliography at the close of each chapter. In its complete topical index the work also conforms to the best usages of recent texts and reference works.

The book is by one too well known and too highly respected to require more than the general statement that it is, for the most part, consistent with his formerly published views, and is an excellent illustration of the success with which a follower of Hegel can appropriate all that modern science has discovered, build from it a concrete practicable educational policy and still maintain the original position of the dominance of idealism, or at least that dominance tempered to equality in the proposition that "eugenics, eutopias, eunoias are the chosen means of the Divine purpose in perfecting mankind." In this age of realism, materialism, not to say scepticism, it cannot be amiss to harken to one who is able to modify and not abandon past methods; to one who assumes to grasp, appreciate and use all that is new, to enrich what is old, in forming not only a system of practical pedagogy but a policy of race improvement.

If one should criticize the work one might raise the question whether the author establishes his thesis, or whether anything valuable is to be contributed by establishing it. The logic is convincing, at least for the moment, in spite of the fact that the influence of idealism as conceived by him is analogous to the effort in lifting oneself by the bootstraps. It is worth something to education to have brought two such mutually opposing principles as heredity and will, or environment and will, so nearly into fusion, although unequally yoked with the biological conceptions of heredity and environment. The following quotation is characteristic of the discussion. "Will by effort realizes the inherited capacity and utilizes the environing opportunity." (p. 140.) Such a statement is an attempt to put Hegelianism in modern phraseology. If the author should as diligently formulate a conception of will as the dynamic life force rather than the supervising and directing agency, without regard to co-equality or a trinity of terms, the work would be more consistent and probably more valuable to the profession, but perhaps less Hegelian. In its present form, though the work is full of interest and of very great value, it is somewhat unsatisfactory as an effort to ally idealism with geneticism. L. W. SACKETT

Vorlesungen zur Einführung in die experimentelle Pädagogik und ihre psychologischen Grundlage, von ERNST MEUMANN. Zweite Auflage. Erster Band. Leipzig, Engelmann, 1911. 725 p.

This is the first volume of a new edition of this well known work. It has been largely rewritten and increased from two, which comprised the edition of 1907, to three volumes. The greatest progress in these two years which he notes is that in the study of the work of school children, and to the former work he adds two important topics, viz., instruction in foreign languages and in mathematical departments. He notes the rapid progress of child psychology and of the study of adolescence or youth. The present volume now contains only studies on the development of youth. The second volume will continue this subject and discuss the relations between development and tests of intelligence, while the third is devoted to didactics and the principles of general pedagogy as based upon these.

The social factors affecting special supervision in the public schools of the United States, by WALTER ALBERT JESSUP. New York, Teachers' College, 1911. 123 p. (Columbia University Contributions to Education, No. 43.)

This study was undertaken in connection with a course in educational sociology. It treats of music, drawing, manual training, domestic science, physical education, penmanship, distribution of special lists, salaries, sex selection, division of responsibility, summary and conclusion.

The children's educational theater, by ALICE MINNIE HERTS. With an introduction by Charles W. Eliot. New York, Harper & Bros., 1911. 151 p.

The author worked seven years in organizing the Children's Educational Theater in New York. In this book she explains the reasons of its origin and the enthusiasm with which the undertaking was supported and the wide influence it has exerted and also how similar theaters can be organized all over the country. The dramatic instinct, says the author, is a primitive influence not to be confused with dramatic talent which is a specialized form of it. This instinct cuts a new and safe channel for a hitherto undirected stream of human energy. Children's love of such entertainment is shown by cheap vaudeville and moving picture shows. In these performances at the children's theater both players and audience were interested and developed artistically, mentally and morally. It is a very interesting and unique story, told with a number of full page illustrations by the author of the movement who will always merit a high place in the development of the movement that seems now to have a great future before it.

Teachers' guide for the use of the "600 set" of Keystone stereographs and lantern slides for visual instruction, by DOUGLAS C. RIDGLEY. Meadville, Pa., Keystone View Co., 1911. 347 p.

The demand for stereographs and lantern slides from teachers is already considerable and is rapidly growing. This book describes a series of 600 pictures selected with special reference to the courses of study in the best elementary and high schools of the country. It is meant to be a school library of pictures. They comprise geographical, historical, commercial and scientific topics with special sections on the world wonders, domestic arts, city life, agriculture, homes, the world's children, races, botany, zoology, geology.

Pure foods, by JOHN C. OLSEN. Ginn & Company, Boston, 1911. 210 p.

The chief trait of this little new book is the experimental illustrations that accompanied the lectures upon which it was based. Some of the experiments are so simple that they could be carried out with ordinary household utensils and some require a well equipped chemical laboratory. The topics are what is food, when is it pure, cost, milk, fats, meats, carbohydrates, candies, food colors, preservation, bread and cereals, spice, condiments, extracts, etc.

Papers on inter-racial problems communicated to the First Universal Races Congress, held at The University of London. July 26-29, 1911. Edited by G. Spiller. London, P. S. King & Son, 1911. 485 p.

That the full report of this congress which ended July 29th is available to readers before the end of September is an admirable example of promptness of publication which should be copied by other conferences and congresses in order that the cause may profit by enabling all interested to read such portions as concern them before the memory of the congress itself has faded. The papers are grouped by sessions into fundamental considerations, general and then special problems, conditions of progress, special problems in inter-racial economics in general, followed by a session with special reference to the Negro and American Indian, positive suggestions for promoting an inter-racial friendliness which occupied the last two sessions. Like all such conferences, the papers differ greatly in merit, but the level of interest, ability and instructiveness is remarkably high.

Nationalities and subject races. Report of Conference held in Caxton Hall, Westminster, June 28-30, 1910. London, P. S. King & Son, 1911. 178 p.

This conference held in London in June was specially to bring together the best opinions concerning "obscure people for whose welfare so few care and upon whom for long centuries the most cruel wrongs have been inflicted by men claiming to belong to higher races." Such conditions were considered in Egypt, India, Finland, Persia, Georgia, Ireland, including fixed and indentured labor, the influence of contact with white men, slavery and the anti-slavery movement. The last session was devoted to proposed remedies. The philanthropic note here dominates.

Questions in municipal civics, by ALBERT A. GIESECKE. Syracuse, C. W. Bardeen, 1911. 114 p. (Cornell Study Bulletins for Teachers, No. 5.)

This book is written on the assumption that city high schools should utilize municipal civics as a means for training citizenship. This the writer believes is more important as well as nearer than national issues. So he discusses relation of city to state, parties, people's duties, the city council, executive, protective, developmental, finance and other functions.

Truths: talks with a boy concerning himself, by E. B. LOWRY. Chicago, Forbes & Company, 1911. 95 p.

This work is addressed to young boys and is simple and elemental. Its chief topics are sowing wild oats, real men who accomplish something, the venders of fake advice, mechanism of our bodies, man's responsibility, the frog pond and the chicken yard, etc.

Confidences with a young girl concerning herself, by EDITH B. LOWRY. Chicago, Forbes & Company, 1911. 94 p.

This is a companion book to the above. Its captions are the secret, flower and bird babies, mother's baby, baby's nest and its building, the sign language, rest and sleep, injury to the next.

Herself: talks with women concerning themselves, by E. B. LOWRY. Chicago, Forbes & Company, 1911. 208 p.

This is another book which is intended to meet the needs of young women and to give them knowledge of the structure and functions of their body so far as it affects the welfare of future generations. Many of its 25 chapters are therefore thus upon anatomy, disease, the black plague, embryology, maternal impressions, why girls and boys go astray, self-abuse, white slavery, what should the child be told, women in business, nervousness, etc.

The answer, by W. J. Chidley. Melbourne, The Australian Authors' Agency, 1911. 79 p.

Human confessions, by Frank Crane. Chicago, Forbes & Company, 1911. 232 p.

The author of this book was until lately a very eloquent preacher and pastor, and he here brings together many very pungent and effective aphorisms on many points of human life which a clergyman sees and very many which very many clergymen never see. The different articles are hardly ever over two pages long, and the caption hardly gives an adequate idea of the contents. It is, however, a most readable and helpful book.

The education of sex. Published by the Gravic Publishing Company, Philadelphia, 1911. 275 p.

This is a compilation from the writings and teachings of many eminent teachers and authorities forming a text book on the physiology of marriage, the phenomena of life, existing social evils and needed reforms, edited by Dr. G. M. Vickers, who draws very freely upon the works of perhaps thirty different authors and seems rather to give the place of honor to Edward W. Sims of Chicago for his fearless reform work. The work treats of many subjects, anatomy, various forms of sex abuse, what a wife and husband ought to be, race suicide, who should and who should not marry, prenatal life, diseases, etc. It is a very plain spoken book and seems to have been compiled with a sense of the great importance of the subject. It is a little difficult to see just what class the work is intended for. Rather it attempts to reach many classes and many kinds of need. In our judgment, it is not, as it stands, the kind of book to be placed in the hands of the young, and yet parts of it contain much that they ought to know.

A history of classical philology, from the seventh century B. C. to the twentieth century A. D., by Harry Thurston Peck. New York, The Macmillan Company, 1911. 491 p.

The author's long experience as a teacher has convinced him that those who pursue the most advanced classical courses are very imperfectly informed as to the history of the subject upon which they are engaged. He writes in the conviction that students proceeding to their doctorate in Greek and Latin should have a knowledge of the larger field of which their work forms a part. It is to supply this need that this book is written in eleven chapters, beginning with the philological studies in Greece, coming down to the Alexandrian, Graeco-Roman, Middle Age, Renaissance, Erasmus period, that of nationalism, the German influence and finally, the cosmopolitan period. Although the work of a scholar, it is written in a way to interest all students of the subject.

Syllabus of a course of study on the history and principles of education, by Paul Monroe. New York, The Macmillan Company, 1911. 87 p.

Although these reference lists are not exhaustive in the sense of Cubberly's syllabus, with its analytical bibliography, the design here is to give the most available useful literature of that likely to be found in the ordinary college and normal school, so that few foreign references are given.

A history of the Rhode Island Normal School, by THOMAS W. BICKNELL. 1911. 236 p.

The author was the man who more than any other did the great work of organizing the National Educational Association into the great power it has since become. As editor of the Boston Journal of Education and as President of the N. E. A. at the great Madison meeting some twenty years ago, which he made the first of the great meetings, attended by 10,000 or 15,000 teachers, he did a very great service. In his retirement he has occupied himself by writing this history of the normal school of his own state in a broad way based largely upon his own personal knowledge and so as to show the general history of education in that state.

An American history, by DAVID SAVILLE MUZZEY. Boston, Ginn & Co., 1911. 662 p.

This volume is said to represent the newer tendencies in history teaching. Its aim is not to tell over once more the old story in the old way, but to give emphasis to those factors in our national development which appeal to us as the most vital from the standpoint of to-day. Beginning with the discovery of America, the writer comes down to the twentieth century, Spanish War, Roosevelt politics and present day problems. The work is illustrated.

Practical botany, by JOSEPH Y. BERGEN and OTIS W. CALDWELL. Boston, Ginn and Co., 1911. 545 p.

As set forth here, the study of plants is related to every day life more closely than in most textbooks. Those aspects of plant life are presented that have the largest significance to the public in general and which are of interest and educative value to beginning students. The work is illustrated by nearly 400 cuts and diagrams of various kinds.

Descriptive writing, by EVELYN MAY ALBRIGHT. New York, The Macmillan Company, 1911. 275 p.

This book is intended as a text in a composition course. It teaches how to give practice in descriptive writing to increase the range of observation, imagination and expression. The first part is devoted to the theory of description, and the second to illustrative material.

Chemistry by WILLIAM CONGER MORGAN and JAMES A. LYMAN. New York, The Macmillan Company, 1911. 429 p.

These writers believe that a student should never be allowed to get the idea that chemistry is a science of girls in the laboratories and acts chiefly in beakers and test tubes. So they have attempted to bring out the humanistic side of a science which is richly laden with human interests because very significant to the race. The authors have tried not only to produce practical material, but also to teach chemistry as a science. To our mind, this text constitutes a very interesting and new departure so far as it seeks to lighten, illuminate and make practical the general principles of the science by showing its applications. This is surely the pedagogic way of approach for the young.

Introduction to general science, by PERCY E. ROWELL. New York, The Macmillan Company, 1911. 302 p.

This book is designed to impress the young with a proper conception of man's place in nature; to make him widen his survey from his immediate surroundings in time and space till he can understand what distinct forces have shaped his own life and its environment. It might serve as a kind of introduction or birdseye view after taking which the youth would be better qualified to select a specialty. Beginning with chemical phenomena, it ends with such subjects as sanitary plumbing, reading meters, manner of living, etc. The botany and geology are largely economic. The book is certainly a most courageous attempt as it were to give an open sesame to the domain of scientific knowledge, but we cannot think the author has succeeded very well, that is, we cannot believe that his points for emphasis are wisely chosen or that many things he excludes should have been excluded.

Teacher's certificate issued under general state laws and regulations, by Harlan Updegraff. Washington, Government Printing Office, 269 p. (U. S. Bureau of Education, Bulletin 1911, No. 18, Whole No. 465.)

Le spectateur: revue critique paraissant chaque mois. Paris, Henry Falque. Troisième année, No. 28, October, 1911.

The new Schaff-Herzog encyclopedia of religious knowledge. Edited by Samuel Macauley Jackson, with the assistance of Charles Colebrook Sherman and George William Gilmore. New York, Funk & Wagnalls, 1911. 504 p. Vol. XI, Son of Man—Tremelius.

Third reader, by Kate F. Oswell and C. B. Gilbert. New York, The Macmillan Company, 1911. 244 p. (The American School Readers.)

Undergraduate work in mathematics in colleges of liberal arts and universities. International Commission on the Teaching of Mathematics. The American Report. Committee No X. Washington, Government Printing Office, 1911. 30 p. (U. S. Bureau of Education Bulletin. 1911, No. 7. Whole No. 453.)

Training of teachers for elementary and secondary mathematics. International Commission on the Teaching of Mathematics. The American Report. Committee No. V. Washington, Government Printing Office, 1911. (U. S. Bureau of Education. Bulletin 1911, No. 12, Whole No. 459.)

A cyclopedia of education. Edited by Paul Monroe, with the assistance of departmental editors and more than one thousand individual contributors. New York, The Macmillan Company, 1911. Vol. 2, Chu-Fus, 726 p.

The educational views and influence of DeWitt Clinton, by Edward A. Fitzpatrick. New York, Teachers College, 1911. 157 p. (Teachers College, Columbia Contributions to Education, No. 44.)

NOTES

A new trade school in Boston, founded by Arioch Wentworth, a citizen of Boston who left over three and a half million dollars for the purpose of "furnishing education in mechanic arts," has already nearly completed its first building and now announces its scope. The initial group of buildings will provide for one-year courses in three building and three manufacturing trades, designed primarily for apprentices. More thorough courses are given to make superior workmen, mechanics and foremen, and are open to those of unusual ability. These two-year courses are to be in machine construction and tool design and electrical instruction and operation. In order to utilize the plant to its maximum, the Wentworth Institute will offer instruction at night similar to that during the day. It will have part-time courses with weekly alternations between employment and school work. In order to keep out those who have little genuine interest in the work a fee of only $6.00 per term is charged and $6.00 for two terms of evening school. So far the plan of the Institute presents nothing startling, but will evidently be a great addition to the admirable educational opportunities offered in Boston. But now comes the great and splendid innovation which Wentworth Institute is making and is contained in the following sentence from its announcement: "No definite amount of previous school training should be required as a standard, but boys who have been partly or perhaps entirely through the high school should be found working side by side with boys who have not even graduated from the grammar school. There are no entrance examinations required for the one-year day courses or for the evening courses. Ability to profit by the instruction is the only requirement." In this element of the plan, Wentworth Institute already more than justifies its existence. It promulgates the principle that children and youth have a right to those opportunities by which they will most profit. It also proclaims that industrial ability has no necessary dependence upon or connection with mere scholastic training. It practically invites all those who can really profit by its courses to come, regardless of every other consideration. This view of human nature is quite in accord with the psychology that is now teaching the independence of human powers one from another and that at least in the scholastic sense there is no such thing as general education.

The Survey[1] reports the first public meeting of the New York League for the Improvement of the Children's Comic Supplement. This league seeks to be a kind of home mission to protect the child against a heathen press which one writer said went on the assumption that all children love to lick paint off wall paper. The *Brooklyn Eagle* is making a high appeal to children against what Hamilton Mabie calls "the most pernicious and vulgarizing single influence that is brought to bear on the child at his most impressionable age." Some of these artists show great originality and inventiveness but the constant push to get something new soon exhausts spontaneity and results in vulgarization. Instead of new "slops," why not revive the work of the old humorists, although we must not deny all justice to Little Nemo or even to Buster Brown. Children should not be taught a form of humor that inculcates disobedience, ridicule, trickery, practical jokes, sensationalism, love of ugliness, meanness and destroys the exquisite natural qualities of the young mind. It is not the sheltered nursery children but those of the poor, to whom the newspaper is the chief intellectual food, that the danger is greatest. These children have keen insights, brilliant imaginations and find the element of cleverness very captivating, but why not make it also healthy like that of Lewis Carroll or Peter Newell?

---

[1] April 15, 1911, p. 103.

In an article entitled "Il metodo Montessori esperimentato in una 1.^{a} classe elementare nell' anno scolastico 1910-11," published in the *Rivista Pedagogica,* November, 1911, and received too late to be incorporated in the article printed in this issue, we have the report of an experiment in the Montessori method as applied to the first grade of the common schools of Rome. The class was formed October 26th, and thirty-one children were registered, but of these six were removed by the medical inspector, two were found to have already had some instruction in reading, and two removed from the locality. Twenty of the children remaining in the class were either already six years of age or reached their sixth birthday before January 1st, one was a backward child of nine, arrested in physical development, and whose mental development appeared to be inferior to that of the children of six. To the twenty-one children thus regularly enrolled were added, for the sake of experiment, two children taken from private kindergartens, who, being only five years old, were too young to be regularly enrolled in the public schools.

As the experiment was conducted in an ordinary school room, furnished with the usual stationary desks and seats instead of being equipped in accordance with the new method, the conditions were by no means ideal for securing the physical liberty of the pupils, deemed by Dr. Montessori so necessary for free intellectual and moral development. The didactic material for teaching reading, writing and arithmetic was not received until January 15th, and the time from October 26th to that date was spent in sense training and especially in muscular and practical exercises, *i. e.,* in developing freedom of movement and independence in waiting upon themselves. All these children had been in a kindergarten but the teacher found them lacking in spontaneity, and complained that they confused goodness and discipline with immobility and silence, so that it was by no means an easy task to inspire them with the idea of freedom in both physical and intellectual movement and individual self-discipline which are fundamental characteristics of the Montessori method.

The autosensorial education was carried on by means of the material which Dr. Montessori has scientifically adapted to the purpose. But this sense training is not limited to the mere reception and retention of the things observed, for the children not only use their powers of observation but they draw their own conclusions and apply their acquired knowledge in every way possible. The interest and unhampered energy of the child being the mainspring of the progress, the teacher noted that the mental food was always adapted in quality and right in quantity for the assimilation of the individual child, and she herself marveled at the results of this spontaneous evolution. With the simple phonic method of teaching the vowels and consonants already described, with simultaneous stimulus of the visual tactile-muscular and auditory sensations, the pupils began spontaneous composition before they had learned the whole alphabet and were thus stimulated to acquire the sounds and symbols which they lacked. There were great individual differences, and the period of learning all the letters of the alphabet and the different combinations into words varied from five to thirty days for the different pupils. It is to be remembered, however, that the learning to read and write is merely the culmination of the previous sense-training. Generally, the learning to read, which began with exercises in composition by means of the movable letters, followed by reading of lesson cards of the first, second and third grades, preceded the phenomena of spontaneous writing. After this stage was reached progress became more rapid.

When the school closed on June 17th eighteen of the children, including the two five-year olds, passed the examination for the second grade. Several of them had surpassed the requirements, being able not only to read and write fluently, but also to read and write numbers beyond 100,000 and to perform addition and subtraction with four, five and six figures. Some of them developed a great fondness for arithmetic and amused themselves by making examples on which to exercise their newly acquired powers. Of the five who did not entirely complete the work of the first grade, one was the backward nine year old, one a child with hereditary defects who could not speak plainly and one a child handicapped by malnutrition. The two others were very near reaching the standard, but as the normal and spontaneous development of the child is the aim of the system, no effort to hasten their progress was made. Perhaps the most interesting thing in the experiment is the fair opportunity for each child to develop in accordance with his own abilities without forcing and without retardation, the more gifted children as well as those less amply endowed doing the work suited to their capacities and doing it happily and with a sense of conquest, for the dullest of these children had no sense of discouragement or failure. So unconscious are they of being taught that one of them, exulting in the newly discovered ability to write, naïvely asked her teacher, "Can you write?"

THEODATE L. SMITH

SUBJECT INDEX

Accounting Pathfinder 261
Administration, Household 262
Adolescence 260
Adolescent, The 116
Adult School Movement 266
Agriculture in the High School, Teaching of 116
American Embassies 269
—History 564
—Teachers 417
Anthology of Modern English Prose 270
Arithmetic, Business 114
—and School Hygiene 54
Artistic Homes 117
Associations in Europe, Voluntary 10

Baby, The 111
Barbarian and Noble 419
Bibliographies
—Arithmetic and School Hygiene 72
—Common Drinking Cup 212
—Disinfection of Books 203
—Health Inspection of Schools 273
—Law and the American Child 181
—Moving Pictures in Education 352
—Pedagogy of College Ethics 472
—Pedagogy as a Science 556
—Plans of Classification in Schools 521
—Psychology of the Club 411
—Training Teachers to Grade 531
—Voluntary Associations in Europe 29
—What is Education? 42
Binet Measuring Scale 232
Books, Disinfection of 197
—Use of 419
Boston, Trade School in 566
Botany, Practical 564
Boy, Talk with a 562
Boys, Work with 111
Buenos Ayres, Education in 107
Business Arithmetic 114

Character, Dawn of 112
—Essentials of 112
Chemistry 564
—Elementary 114
Child, American, Law and the 121
—Career of the 264
—Conference 109
—Development, Subjective View of 417
—Life, A Study of 112
—The Modern 109
—Nature 264
—The Obstinate 315
—Psychology 110
—School Age of 264
—School, Problem of the Crippled 111
—The Town 264
—Welfare, Encyclopedia of 419
—Welfare in the South 110
Childhood, Diseases of 111
—Houses of 533, 567
Children, Health Index of 110
—Measured by the Binet Scale 232
—Neglected 269
—Training of 266
Children's Educational Theatre 561
—Ideals 219
—Labor Exchanges 115
Church, Medicine and the 116
Civic Nurture 261
Civics, Municipal 562
Clark University, Conference at 109
——Journal of Race Development 113
Class Teaching and Management 108
Classic Myths 115
Classical Philology 563
Classification in the Public Schools 475
Club, Psychology of the 353
College Ethics, Pedagogy of 421
—Teaching, Supervision of 543
Comic Supplement 566
Conduct of Life 111
Confessions, Human 563
Congo, Voice from the 113
Congress, Universal Races 1911 561

Correction and Prevention 269
Cost Accounting Pathfinder 261
—of Living 263
Country, Our 419
Craftsmanship in Teaching 266
Crippled School Child, Problem of the 111
Cup, The Common Drinking 205
Cyclopedia of Education 106

Dances, Play Book of 110
Defective Classics in Switzerland 111
Degrees, French University 267
Delusion, Educational 44
Descriptive Writing 564
Diseases of Infancy and Childhood 111
Disinfection of Books 197
Drinking Cup, The Common 205

Education in Buenos Ayres 107
—Cyclopedia of 106
—Elementary, Defects of 418
—England's Need in 265
—Idealism in 108, 559
—Jewish 214
—Modern 109
—Moral 112
—Moving Pictures in 336
—of a Music Lover 268
—National Society for Study of 267
—Principles of 264, 266, 415
—Report of, in Massachusetts 271
—of Sex 563
—Syllabus on History and Principles of 563
—Text-book in Principles of 108
—Vocational 116
—What is 31
Educational Aims and Efforts 109
—Delusion, A Basic 44
—Foundations 269
—Progress, Annals of 267
—System in Massachusetts 117
—Values 265
Educator, Spinoza as an 419
Efficiency as a Basis for Wages 263
—Human 74
Elementary Chemistry 114
—Education, Defects of 418
—School Problems 108
Embassies, American 269
Encyclopedia of Child Welfare 419

England's Need in Education 265
English Prose, Anthology of 270
Ethics, College, Pedagogy of 421
—Social, Guide to Reading in 113
Eugenics 267
Experimental Pedagogy 110, 265, 533, 560, 567
Expressing and Knowing 47

Fairy Tales of All Nations 114
Foods, Pure 561
France, Laws Relating to Maternity Assistance 118
—Prevention of Infant Mortality 419
—University Degrees in 267

Geographic Reader 419
Geometry, Teaching of 420
German Teachers, Training of 116
—Universities 108
Germany, Modern 263
Girl, Confidences with a 562
Girls, Public Schools for 115
Grammar, Exercises in 270
Greatness in Men 266
Grecians, The 270

Health Index of Children 110
—Inspection of Schools 273
Heredity versus Environment 267
High School Grammar 270
— —Latin, Vocabulary of 270
Hindu-Arabic Numerals 418
History, American 564
—in Secondary Schools 270
Homes, Artistic 117
Household Administration 262
Human Confessions 563
—Efficiency 74
Humor 566
Hygiene, Personal 111
—School, Arithmetic and 54
—Sex, Plain Facts on 111

Idealism in Education 108, 559
Ideals, Children's 219
—in Work with Boys 111
Individual in the Making 417
Industrial Management 262
—Studies 114
Infancy, Diseases of 111
Infant Mortality in France, Prevention of 419
Intellectual Precocity 85
Intelligence, Binet Measuring Scale of 232

Inter-racial Problems 561

Jewish Education, Problem of 214
Jews, The 113

Knowing and Expressing 47

Labor Exchange, Children's 115
Lady, The 269
Lantern Slides, Guide for Use of 561
Latin, Vocabulary of 270
Law and the American Child 121
Literature, Evolution of 268
Living, Cost of 263
Love's Pilgrimage 268

Mammals, The Age of 113
Marriage 268
Massachusetts Educational System 117
—74th Report State Board of Education 271
Maternity Assistance in France 118
Mediaeval Builders of the Modern World 419
Medicine and the Church 116
Men, Greatness in 266
Minneapolis, Report of Vice-Commission 416
Montessori, Maria, and Her Houses of Childhood 533, 567
Moral Education 112
Moving Pictures in Education 336
Municipal Civics 562
Music Lover, Education of a 268
Musician, American 117
Myths, Classic 115

Neglected Children, Preventive Treatment of 269
Newark, New Jersey, Study of 329
Newspaper, The American 116
New York City Teachers' Salaries 117
——League for Improvement of Comic Supplement 566
Newspaper, Comic Supplement 566
Normal School, Rhode Island 564
Norwich (England), A Social Study 112
Numerals, Hindu-Arabic 418

Obstinate Child, The 315
Old Age Deferred 115
Open Air Crusaders 109
Orient, The Obvious 267

Peace, Universal 419
Pedagogy of College Ethics 421
—Experimental 110, 533, 560, 567
—Institute for 265
—as a Science 551
Penal and Reformatory Institutions 269
Personal Equation, The 117
Philology, Classical 563
Pictures in Education, Moving 336
Pinocchio in Africa 419
Play Book of Dances 110
Precocity, Intellectual 85
Prevention and Correction 269
Preventive Treatment of Neglected Children 269
Psychology of the Child 110
—Institute for 265
—Social 353
Puberty 264
Public Schools for Girls 115
Pure Foods 561

Race Development, Journal of 113
—and Environment, Study of 113
—Problems 561
Races, Subject 562
Reading in Social Ethics 113
Reasoning in Teaching, Place of 184
Reform, University 109
Reformatory and Penal Institutions 269
Research, The Outlook for 1
Retardation, Study of 418
Rhode Island Normal School, History of 564

Salaries of Teachers, Report on 117
School Age 264
—Child, Problem of the Crippled 111
—City, as a Community Centre 267
—Hygiene 104
——Arithmetic and 54
—Movement, The Adult 266
—Plant, Wider Use of the 112
—Problems, Elementary 108
Schools, Classification in 475
—for Girls, Public 115
—Health Inspection of 273

—History in 270
—Open Air 109
—Progress Through Grades of 417
—Secondary, Training of Teachers for 116
—Study of a City in 329
—Supervision in 561
Science, Introduction to 564
—The Marvels Beyond 113
—Pedagogy as a 551
Secondary Schools, History in 270
— —Training of Teachers for 116
Self-education 418
Sex 562
—Books 115
—Education of 563
—Hygiene, Plain Facts on 111
Sidis, Boris, Son of 85
Social Composition of the Teaching Population 417
—Ethics, Guide to Reading in 113
—Factors Affecting Supervision in Schools 561
—Psychology, Study in 353
—Study, A 112
—Welfare, Training of Children in 266
Spelling Efficiency 262
Spinoza as an Educator 419
Subject Races 562
Switzerland, Defective Classes 111

Tales Come True 115
Teachers' Guide for Use of Lantern Slides 561
—Salaries, Report on 117
—Training to Grade 523
Teaching, Class, and Management 108
—College, Supervision of 543
—Craftsmanship in 266
—of Geometry 420
—Place of Reasoning in 184
—Population, Social Composition of 417
Text-book in Principles of Education 108
Theatre, Children's 561
Town Child 264
Trade School in Boston 566
Training Teachers to Grade 523
—of Teachers for Secondary Schools 116

United States Schools, Health Inspection of 273
Universities, German 108
—and National Life 118
University Reform 109

Vacation Colonies 110
Vice-Commissioner of Minneapolis, Report of 416
Vocabulary of High School Latin 270
Vocational Education 116
—Guidance of Youth 105
Voluntary Associations in Europe 10

Wages 263
War Diary 117
—is Mesmerism 419
Woman 269
—Position of 268
—and the Republic 114
Women, Talks with 562
Work, Wages and Profits 263
World, What's Wrong with the 114
Writing, Descriptive 564

Youth, Vocational Guidance of 105

INDEX OF AUTHORS

(The names of those who have contributed original matter are printed in SMALL CAPITALS.)

Abbott, Allan 118
Addams, George S. 111
Albright, Evelyn May 564
Albutt, Clifford 116
Allen, James 118
Allen, Nellie B. 114
Arnold, W. A. 114
Ayres, Leonard P. 269

Bagley, William Chandler 265, 266
Baldwin, Edward Chauncey 117
Bardeen, C. W. 117
Barker, J. Ellis 263
Barnett, Annie 270
Bergen, Joseph Y. 564
Bicknell, Thomas W. 564
Bigelow, Anson H. 114
Blan, Louis B. 418
Bloomfield, Meyer 105
Bohner, E. E. 111
Bolton, Frederick Elmer 264, 415
Bötnner, Magda 418
Bouquet, Henri 419
Bray, Reginald A. 264
Bricker, Garland Armor 116
Brown, Daniel Rollins 111
Brown, John Franklin 116
Buckbee, Anna 419
Burgerstein, Leo 104
BURNHAM, WM. H. 54
Burstall, Sara A. 115
BUTTENWIESER, ELLEN CLUNE 315
Byrnes, James C. 272

Caldwell, Otis W. 564
CAPEN, SAMUEL P. 543
CARRIGAN, THOMAS CHARLES 121
Chamberlain, Arthur Henry 420
Chamberlain, James Franklin 420
Chancellor, William Estabrook 108
Chesterton, Gilbert K. 114
Chidley, W. J. 563
Claparède, Eduard 110, 420
Coffman, Lotus Delta 417
Cohn, Jonas 420
Compayré, Gabriel 260
CONKLIN, EDMUND S. 421
Crackel, M. D. 111
Crampton, C. Ward 111
Crane, Frank 563

Dale, Lucy 270
DANA, JOHN COTTON 329
Delpy, Arthur 110
Denis, Pierre 271
Dickinson, Edward 268
Dieffenbacher, Julius 420
Dimnet, E. 271
Douglas, M. A. 115
DREW, FRANK 261
Duncan, John C. 262

Elderton, Ethel M. 267
Eliot, Charles W. 561
Emerson, Harrington 263

Fick, R. 108
Findlay, J. J. 116
FINKENBINDER, E. O. 415
Fishberg, Maurice 113
Fiske, G. Walter 111
Fitzpatrick, Edward A. 565
Flecker, James Elroy 270
FLEMING, PIERCE J. 336
Forbush, William Byron 118
Foulis, Hervey Elwes 109
Frank, Maude M. 270
Froument, P. 118

Gantt, H. L. 263
Garber, John Palmer 267
Gaston, Charles Robert 117
Gayley, Charles Mills 115
Giesecke, Albert A. 562
Gilbert, C. B. 565
Gillette, John M. 116
Gilmore, George William 505
GODDARD, HENRY HERBERT 232
Godfrey, Hollis 114
Goodwin, Frank E. 261
Grasset, Joseph 113
Groszmann, Maximilian P. E. 264
Gudden, Hans 264

Haeckel, Ernest 271
Haldane, R. B. 118
Hall, Winfield S. 111
HANCOCK, JOHN A. 184
Harris, Charles A. 117
Hart, Albert Bushnell 267
Hart, Hastings H. 269
HARTSON, LOUIS D. 10, 353
Hawkes, Herbert E. 272
Hawkins, C. B. 112
Heller, Th. 419
Henderson, Charles Richmond 269
Henderson, Ernest Norton 108
Herts, Alice Minnie 561
HILL, DAVID SPENCE 110, 219
Hoag, Ernest Bryant 110
Hobley, Edgar F. 266
HOLMES, W. H. 475
Horne, Herman Harrell 108, 559
Hosic, James F. 118
Howard, William Lee 111
Hughes, James L. 117

Jackson, Samuel Macauley 565
Jessup, Walter Albert 561
Johnson, Helen Kendrick 114, 420
Jones, W. Franklin 266
Jordan, David Starr 111

Karpinski, Louis Charles 418
Keeling, Frederick 115
Kerschensteiner, Georg 261
Keyes, Charles Henry 417
Kimmins, G. T. 110
Kingsly, Sherman C. 109
Kirkpatrick, E. A. 417
Knowlson, Joseph S. 265
KOOPMAN, HARRY LYMAN 44
Koszul, A. 271

Lafontaine, Albert 420
Lagenardière, Raoul de 117
Lansing, Marion Florence 419
Larned, J. N. 266
Legouis, E. 271
Lemaitre, Aug. 260
Lloyd, J. S. T. 118
Lodge, Gonzalez 270
Lodge, Oliver 268
Lodge, Thomas 117
Lombard, Louis 117
Lombroso, Paola 264
Lorand, Arnold 115
Lowry, E. B. 271, 562
Luby, William A. 272
Lyman, James A. 564
Lynch, Charles 420

Mackenzie, A. S. 268
MACLAURIN, RICHARD C. 1
Magnus, Philip 109
Mark, Thistleton 420
Marshall, Logan 114
MATHENY, W. A. 205
Matthay, Tobias 271
McComb, E. H. Kemper 118
McTurnan, Lawrence 117
Mendousse, P. 260
Mercer, Thomas W. 266
Meumann, Ernst 560
Miall, Bernard 271
MILLNER, A. 214
Mocquilon, H. 418
Monroe, Paul 106, 563, 565
Monroe, Will S. 419
Morgan, William Conger 564
Mulzer, P. 271
Mumford, Edith E. Read 112
Muzzey, David Saville 564

NICE, LEONARD BLAINE 197

OGDEN, R. M. 47
Osborn, Henry Fairfield 113
Oswell, Kate F. 565
Owen, Edward T. 271

Patel, R. D. 109
Patri, A. 419
Peck, Harry Thurston 563
Penniman, James Hosmer 419
Perry, Arthur C., Jr. 108
Perry, Clarence Arthur 112
Pizzurno, Pablo A. 107
Plantet, Eugène 110
Polik, Henry K. 111
Priestman, Mabel Tuke 117
Putnam, Emily James 269

Rabenort, William Louis 419
RADOSALJEVICH, PAUL R. 31, 551
Ravenhill, Alice 262
Rhodes, Geoffrey 116
Richmond, Julia 272
Ridgley, Douglas C. 561
Roberts, John S. 272
Robinson, A. W. 116
Robinson, Edgar M. 111
Rogers, James Edwards 116
Rogers, Lillian Emily 118
Rowell, Percy E. 564
Rzesnikek, Schulrat 118

SACKETT, L. W. 559
Scheiflin, P. Z. 111

Schiff, Catherine J. 262
Schiller, Fr. 419
Schroeder, Theodore 271
Seton, Ernest Thompson 111
SHAFER, GEORGE H. 273
Sherman, Charles Colebrook 565
Sinclair, Upton 268
Sisson, Edward O. 112
Slaughter, J. W. 116
Slosse, A. 272
Smart, Isabelle Thompson 115
Smith, David Eugene 418, 420
SMITH, THEODATE L. 107, 260, 533, 567
Soares, Theodore G. 111
Spiller, G. 561
STEELE, A. G. 523
Stilwell, Arthur Edward 419
STOREY, THOMAS A. 104
Super, Charles William 117

TANNER, AMY E. 110
Taube, M. 419
Telford, E. D. 111
Touton, Frank C. 272
Towson, Charles R. 111

Updegraff, Harlan 565

Vindin, Dawson A. 271
Vöhl, Emma 418

Walker, Margaret Coulson 114
WALLIN, J. E. WALLACE 74, 262
Ward, Herbert 113
Warren, John 271
Waxweiler, E. 272
WILLIAMS, TOM A. 85
Winch, W. H. 264
Wingerath, Herbert H. 118
Wolfarth, Julia Helen 118
Wood, Walter M. 111
Woolnoth, M. H. 110

003141

10